

# 2

## FINANCIAL SECTOR RISKS AND RESILIENCE



## 2 FINANCIAL SECTOR RISKS AND RESILIENCE

Despite the growing macro-financial stress, bank lending in Spain was steady in the first half of the year, with growth in some portfolios, such as loans for house purchase. Banks' balance sheet quality also improved in the period, with NPLs, Stage 2 loans, forborne loans and foreclosures all lower. Ordinary net profit in the sector also evolved favourably, underpinned by the improvement in net interest income and fees and commissions. Meanwhile, in the 12 months to June 2022, the average CET1 ratio of the Spanish banking sector fell, essentially owing to the growth in risk-weighted assets (RWAs). However, sector solvency remains above the pre-pandemic level.

In any event, were the macroeconomic risks described in the previous chapter to materialise, the adverse impact on banks' profitability and solvency could be significant. Rising interest rates will foreseeably boost banks' income, but they will also put upward pressure on their funding costs. In particular, the pass-through of higher market rates to the cost of deposits may increase going forward. Moreover, higher borrowing costs for households and firms, together with a drop in their real income owing to higher inflation, will reduce their ability to pay, which in turn could trigger a significant increase in impairment provision costs. In this respect, the Banco de España's stress tests reflect high aggregate resilience in the banking sector to an adverse scenario of materialisation of macro-financial risks, even though this would entail a certain degree of capital charge and the impact is uneven across banks according to their business model. Thus, banks need to implement a prudent provisioning policy and plan their capital policy correctly, to sufficiently factor in the prevailing high level of uncertainty.

### 2.1 Deposit institutions

#### 2.1.1 Balance sheet structure, risks and vulnerabilities

##### *Credit risk*

**Bank lending was stable in Spain in the 12 months to June 2022.** The outstanding amount of loans extended to the resident private sector fell by 0.1% year-on-year in June (see Chart 2.1.1). Excluding credit extended to other financial corporations, credit to the non-financial private sector also posted moderate growth, up 0.5% year-on-year.

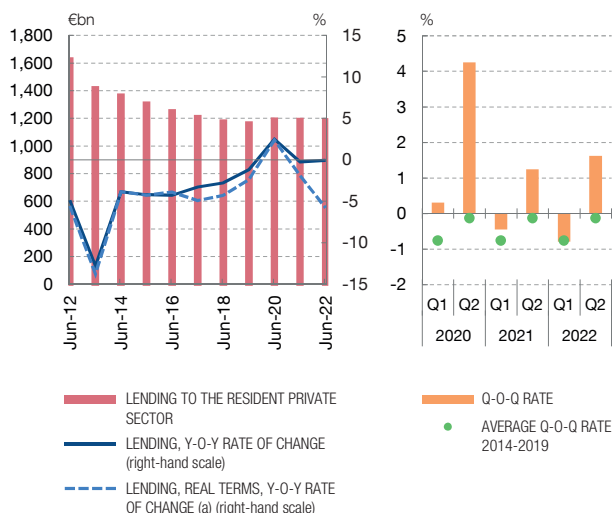
**However, lending decreased in real terms owing to high inflation.** Specifically, the year-on-year rate of change of credit to the resident private sector in real terms in

Chart 2.1

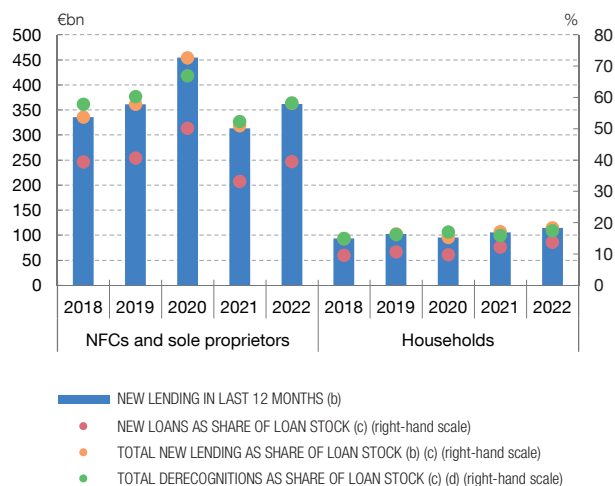
**IN NOMINAL TERMS, LENDING TO THE RESIDENT PRIVATE SECTOR HELD STEADY IN THE FIRST HALF OF 2022, THANKS TO THE BALANCE BETWEEN DERECOGNITIONS AND NEW LENDING**

The growth in new lending to households and non-financial corporations to June 2022 was almost fully offset by the increase in derecognitions. However, the high inflation in recent months has led to a sharp contraction in lending in real terms. Given the low pass-through of inflation to private agents' income, this decrease in real lending is not indicative of a widespread reduction in households' and firms' debt burden.

1 VOLUME OF LENDING AND YEAR-ON-YEAR RATE OF CHANGE  
Business in Spain, ID



2 VOLUME OF NEW LENDING IN LAST 12 MONTHS.  
DATA AT JUNE FOR EACH YEAR  
Business in Spain, ID



SOURCE: Banco de España.

- a The "lending, real-terms rate of change" series is obtained taking into account its composition, deflating the portion of lending to households for non-business purposes using CPI, and all other lending (to NFCs, financial corporations and sole proprietors) using the GDP deflator.
- b New lending is the sum of new loans extended and increases in principal owing to drawdowns under existing credit lines.
- c Considering the loan stock at June of the previous year.
- d Derecognitions include repayments, write-offs, securitisations and portfolio sales.

June 2022 was 5.8% (compared with 1.9% in June 2021). In any event, given the low pass-through of inflation to private agents' income, this decrease in real lending is not indicative of a widespread reduction in households' and firms' debt burden.

**Stable lending in nominal terms is a consequence of the balance between new lending and derecognitions (owing to repayments, write-offs, securitisations and portfolio sales)** (see Chart 2.1.2). In this respect, in the case of loans to NFCs and sole proprietors, the share of both new lending and derecognitions<sup>1</sup> in the 12 months to June 2022 amounted to around 60% of the stock existing at June 2021, representing virtually no change in that period.<sup>2</sup> The distribution of new lending

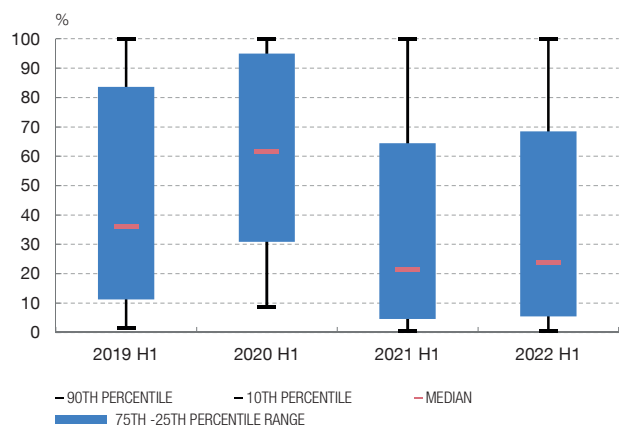
1 New lending includes new loans and increases in amounts withdrawn under pre-existing credit lines. Derecognitions include repayments, write-offs, securitisations and portfolio sales.  
2 The latest data available for 2022 Q3 point to greater dynamism in the stock of credit to non-financial business, which will have to be confirmed as more data become available in the coming quarters.

Chart 2.2

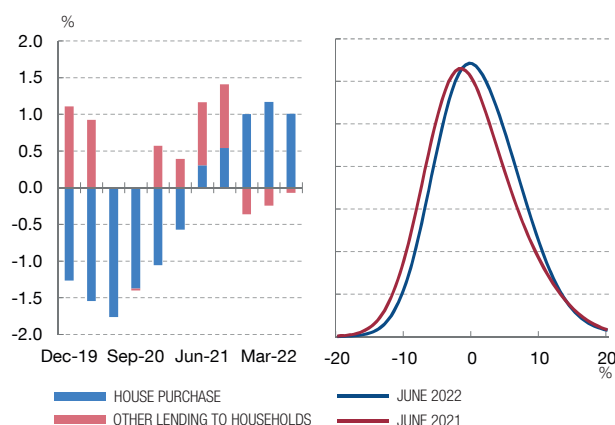
**THE CONTRIBUTION OF NEW LENDING TO THE CORPORATE LOAN STOCK ROSE VERY MODERATELY IN THE FIRST HALF OF THE YEAR, WHILE LOANS FOR HOUSE PURCHASE CONTINUED TO UNDERPIN THE GROWTH IN LENDING TO HOUSEHOLDS**

The distribution of new lending among firms as a proportion of their total loan stock shifted upwards slightly in the first half of the year, both at the median level and in other deciles. The stock of loans to households rose by 0.9% year-on-year in June 2022, largely owing to loans for house purchase. The distribution of the growth in loans for house purchase shifted upwards slightly in June 2022 compared with the same period a year earlier.

1 DISTRIBUTION OF SHARE OF NEW LENDING AS PROPORTION OF EXISTING LOAN STOCK IN FIRST HALF-YEAR (a)



2 CONTRIBUTIONS TO THE Y-O-Y RATE OF CHANGE OF LENDING TO HOUSEHOLDS (L-H PANEL) AND DISTRIBUTION OF BANKS BY THE Y-O-Y RATE OF CHANGE OF LOANS FOR HOUSE PURCHASE (R-H PANEL) (b)  
Business in Spain, ID



SOURCE: Banco de España.

- a The share of new lending is calculated for each firm as the volume of new loans arranged in the half-year, divided by the volume of their loans at the end of the half-year. The chart depicts the distribution of this ratio for all firms reporting new loans to the Central Credit Register (CCR) in the half-year; firms that have not arranged new loans (whose ratio would be 0%) are not considered. A figure of 100% indicates that the firm's previous loan amount was zero. Non-financial corporations only.
- b The chart depicts the density function of the year-on-year rate of change of loans for house purchase for Spanish deposit institutions, weighted by the amount of loans for house purchase. The density function is estimated using a kernel estimator, which enables non-parametric estimation and provides a continuous, smoothed graphic representation of the function.

among firms as a proportion of their total loan stock rose somewhat in the first half of the year, both for median-level firms (23.7% of their loan stock had been drawn in the first six months of 2022, compared with 21.3% in the same period a year earlier) and for firms in other deciles (see Chart 2.2.1). This indicates that there are no widespread signs of a rapid build-up of new credit risk in this segment in the first part of the year. For households, in the 12 months to June 2022 new lending as a proportion of their total loan stock was almost 1 pp higher than derecognitions, resulting in moderate growth in that total. Also noteworthy was the flow of new lending, both to business and households, which exceeded the 2019 pre-pandemic levels.

**The stock of loans to households rose by 0.9% year-on-year to June 2022, driven by growth in loans for house purchase.** Loans for house purchase rose by 1.3% year-on-year in June 2022, compared with 0.4% a year earlier, more than offsetting the drop in lending for all other purposes, down 0.4% year-on-year. Thus, the positive

contribution of loans for house purchase was a determinant factor in the growth in the stock of loans to households in the 12 months to June 2022 (see Chart 2.2.2, left-hand panel). The distribution between banks of the growth in loans for house purchase held relatively steady between June 2021 and June 2022, showing just a moderate shift upwards (see Chart 2.2.2, right-hand panel).

**The rate of decline in the volume of NPLs has quickened, with rates similar to those observed pre-pandemic.** In June 2022, the year-on-year rate of change of non-performing loans to the resident private sector stood at 12.4%, down more than 4 pp on the previous quarter (see Chart 2.3.1). This sharper decline, observed among NFCs and sole proprietors (-9.2%) and households (-16.7%) (see Chart 2.3.2), was widespread across banks and is explained by fewer new NPLs, increasing collections and, especially, some banks' sales of troubled asset portfolios. This in itself is a positive sign of the banking sector's capacity to manage credit risk, as the markets for such impaired assets are especially sensitive to uncertain environments such as the present one. By contrast, non-performing consumer loans are still 10% above their pre-pandemic level, despite falling by 9.5% in the 12 months to June 2022.

**The NPL ratio stood at 3.8% in June 2022, below 4% for the first time since December 2008.** In the 12 months to June 2022 it fell by 0.5 pp, down 0.5 pp to 5.1% for NFCs and sole proprietors and down 0.7 pp to 3.1% for households. The NPL ratio for loans to the resident private sector has decreased by 1 pp since December 2019 (see Chart 2.3.1).

**Despite the overall decline in NPLs, credit quality impairment is observed in some sectors.** Specifically, in the business sectors most severely affected by the pandemic<sup>3</sup> the NPL ratio stood at 5.9% at December 2021, up from 5% at December 2019. In the first half of 2022, the NPL ratio in this segment (which accounts for 17.9% of total credit to non-financial business at June 2022) continued to increase, albeit slowly, standing at 6.1% at June (see Chart 2.3.3). Meanwhile, in the sectors moderately affected or largely unaffected by the pandemic, the NPL ratio fell steadily in this period. The sectors most severely affected by the pandemic benefited the most in the first half of the year from the lifting of the health restrictions. However, they now face new risks owing to the deterioration of the macroeconomic outlook, with an already weakened financial position as a result of the pressures on their profitability in the period 2020-2021.

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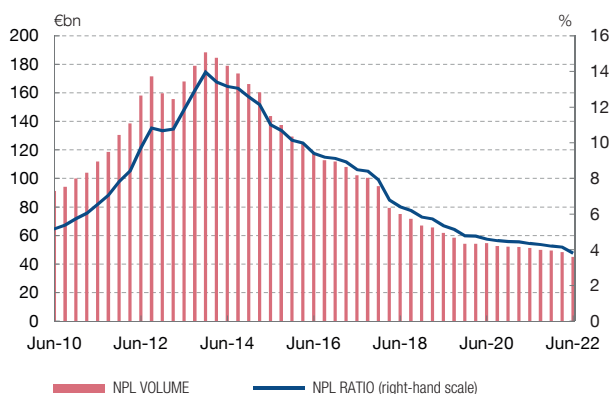
3 Credit to the most severely affected sectors is proxied by credit to sectors whose turnover fell by more than 15% in 2020 and that can be identified in the FI-130 regulatory return; specifically, hospitality, manufacture of refined petroleum products, social services and entertainment, transportation and storage, and manufacture of transport equipment. Credit to sectors moderately affected is proxied by credit to the following sectors as per the FI-130 regulatory return: manufacture of basic metals, manufacture of machinery, other manufacturing, professional services, extractive industries, wholesale and retail trade, and repair of vehicles. All other productive activities comprise the group of sectors that were largely unaffected by the pandemic.

Chart 2.3

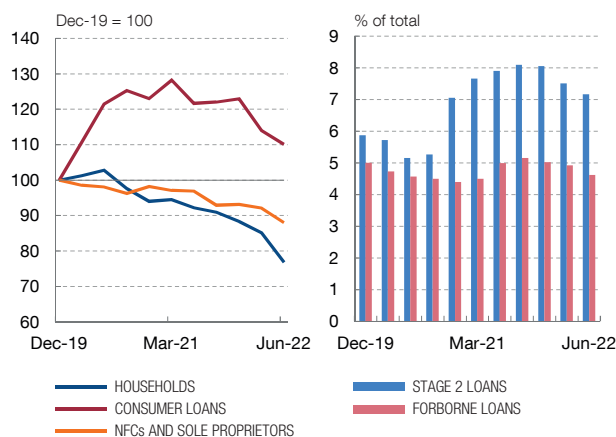
**IN THE LAST HALF-YEAR, BOTH NPL VOLUME AND THE NPL RATIO CONTINUED TO DECLINE, WHILE STAGE 2 AND FORBORNE LOANS ALSO FELL AS A PERCENTAGE OF THE TOTAL**

NPLs of the resident private sector fell by 12.4% year-on-year in June 2022. NPL ratios also fell (down to below 4% for the first time since 2008), as did Stage 2 and forborne loans. The fall in NPLs was most marked in lending to households, partly owing to wholesale sales of troubled asset portfolios. By business sector, NPLs only rose – albeit very moderately – in the sectors most severely affected by the pandemic. Firms with Stage 2 loans in June 2022 had worse ROA and debt ratios, which makes them more vulnerable to macro-financial deterioration.

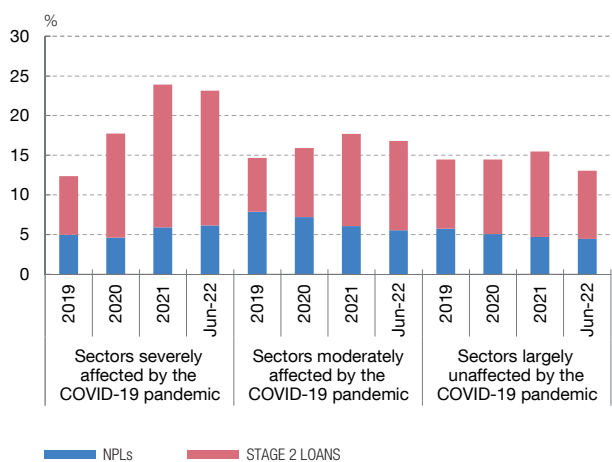
1 NPLS AND NPL RATIO OF THE RESIDENT PRIVATE SECTOR  
Business in Spain, ID



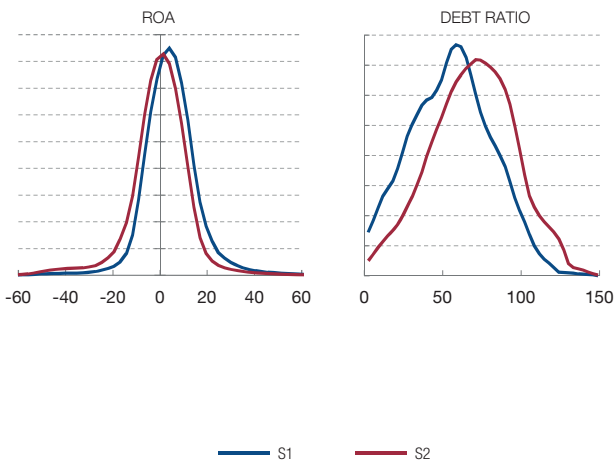
2 NPL VOLUME (L-H PANEL) AND SIGNS OF EARLY IMPAIRMENT IN LENDING TO THE RESIDENT PRIVATE SECTOR (R-H PANEL) (a)  
Business in Spain, ID



3 SHARE OF NON-PERFORMING AND STAGE 2 LOANS.  
NFCs AND SOLE PROPRIETORS (b)  
Business in Spain, ID



4 DISTRIBUTION OF STAGE 1 AND STAGE 2 LOANS BY DEBTOR FIRM CHARACTERISTICS, JUNE 2022 (c)  
Business in Spain, ID



SOURCE: Banco de España.

- a Stage 2 and forborne loans, as their respective share of total credit to the resident private sector.
- b Credit to the most severely affected sectors is proxied by credit to sectors whose turnover fell by more than 15% in 2020 and that can be identified in the FI-130 regulatory return; specifically, hospitality, manufacture of refined petroleum products, social services and entertainment, transportation and storage, and manufacture of transport equipment. Credit to sectors moderately affected is proxied by credit to the following sectors as per the FI-130 regulatory return: manufacture of basic metals, manufacture of machinery, other manufacturing, professional services, extractive industries, wholesale and retail trade, and repair of vehicles. All other productive activities comprise the group of sectors that were largely unaffected by the pandemic. The 2019, 2020 and 2021 data as at December.
- c The chart depicts the ROA and debt ratio density functions for firms with Stage 1 (performing) and Stage 2 (SICR) loans, weighted by the loan amount drawn by each firm. ROA is the return on assets, and the debt ratio the ratio of interest-bearing borrowing to net assets. The density function is estimated using a kernel estimator, which enables non-parametric estimation and provides a continuous, smoothed graphic representation of the function. The ROA and debt ratio are obtained from the Central Balance Sheet Data Office (CBSO) database at the 2020 close, while the information on the credit quality of loans to firms are taken from CCR data at June 2022. The chart does not consider firms with ROA or a debt ratio above (below) the 95th (5th) percentile of the distribution.

**The proportion of Stage 2 exposures<sup>4</sup> and forborne loans decreased in the first six months of the year, although Stage 2 exposures remain above their pre-pandemic levels.** Stage 2 loans peaked as a proportion of the total stock of credit to the resident private sector at 8.1% in September 2021 (see Chart 2.3.2) and then decreased, reaching 7.2% in June 2022. Specifically, in the business sectors most severely affected by the pandemic, Stage 2 loans accounted for 18% of the total in December 2021, and fell slightly, to 17%, in the first half of 2022. In the business sectors moderately affected and largely unaffected by the pandemic, at June 2022 Stage 2 loans accounted for 11.3% and 8.6%, respectively (see Chart 2.3.3). In the resident private sector overall, Stage 2 loans continue to account for a higher proportion than in the pre-pandemic period (5.9% at December 2019). The distribution at June 2022 of profitability (ROA) and debt ratios among firms with Stage 2 loans is worse than that among firms whose loans are classified as performing (see Chart 2.3.4), consistent with the fact that Stage 2 exposures are considered lower credit quality. Meanwhile, forborne loans, which are also generally associated with a higher probability of default (and whose NPL ratio at June 2022 was 50.4%), performed similarly to Stage 2 loans. Their share of total loans peaked in September 2021 at 5.2% and then fell to 4.6% at June 2022 (see Chart 2.3.2), in this case below the pre-pandemic figure (5%).

**Foreclosed assets totalled €21.3 billion in June 2022, a decrease of €4.6 billion (-17.8%) compared with June 2021.** This rate of decline is similar to that observed in December 2021 (-16.7%), but lower than the rates recorded in the years immediately preceding the onset of the pandemic (-28.8% year-on-year in December 2019), when major efforts were made to remove these assets from balance sheets, in particular through wholesale portfolio sales. Foreclosed assets were lower across the board at June 2022.

**Loans backed by the Official Credit Institute (ICO) extended to firms and sole proprietors continued to see some impairment, but at a slower pace than in previous six-monthly-periods, while the credit quality of loans outstanding linked to expired moratoria improved somewhat.** Drawing on data from the Banco de España's Central Credit Register (CCR), the percentage of ICO-backed Stage 2 loans rose from 20.2% in December 2021 to 22.8% in June 2022 (see Chart 2.4.1). Meanwhile, the percentage of NPLs in the ICO-backed loan portfolio rose by somewhat more than 1 pp, from 3.5% to 4.8% in the same period. Nevertheless, the proportion of customers in the total ICO loan portfolio with some non-performing exposure (whether or not ICO-backed) decreased slightly compared with the previous quarter, from 12.9% to 12.6%. Box 2.1 analyses the relationship in ICO-backed loans between maturity extensions and grace period expiry, on the one

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<sup>4</sup> Pursuant to [Circular 4/2017](#), a loan is classified as a Stage 2 exposure when credit risk has increased significantly since initial recognition, but no event of default has occurred.

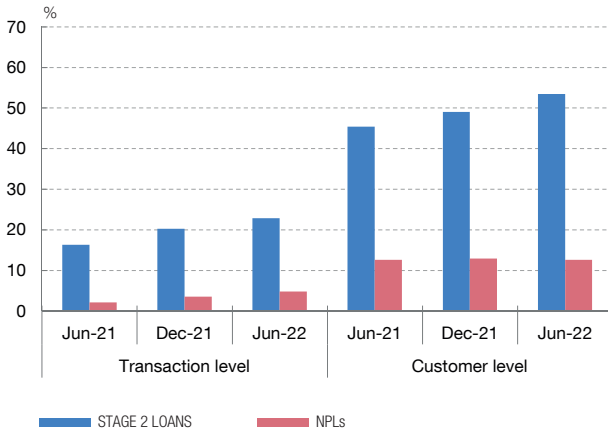


Chart 2.4

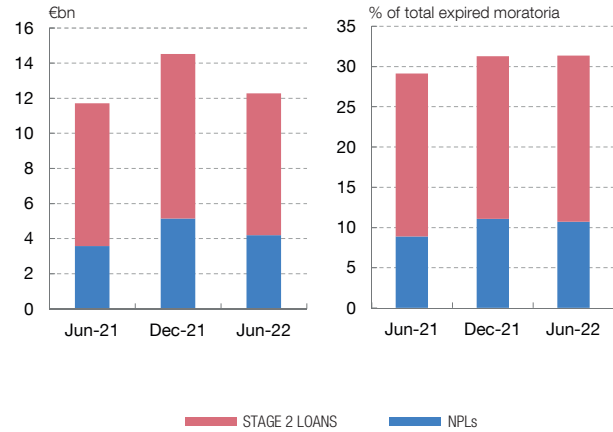
**THE PACE OF IMPAIRMENT OF THE ICO LOAN PORTFOLIO WAS SLOWER IN THE FIRST HALF OF 2022 THAN IN PREVIOUS QUARTERS, WHILE THE NPL RATIO OF LOANS OUTSTANDING LINKED TO EXPIRED COVID-19 MORATORIA FELL SLIGHTLY**

Within the ICO-backed loan portfolio, Stage 2 loans and NPLs rose by close to 2 pp and 1 pp, respectively, in the first half of the year. However, the proportion of customers in this portfolio with some non-performing exposure (whether or not ICO-backed loans) decreased from 12.9% to 12.6% in the same period. In the case of outstanding loans linked to expired or cancelled moratoria, 10.7% were non-performing at June 2022, compared with 11.1% at December 2021, although the proportion of Stage 2 loans in this portfolio rose slightly in the period.

1 CREDIT QUALITY OF STOCK OF ICO-BACKED LOANS (a)  
Business in Spain. ID



2 NPLs AND STAGE 2 LOANS WITH EXPIRED COVID-19 MORATORIA (b)  
Business in Spain. ID



SOURCE: Banco de España.

- a In the transaction-level analysis, the proportional volume of ICO-backed loans to firms and sole proprietors that are non-performing or Stage 2 loans is measured. The customer-level analysis assesses for each firm and sole proprietor with an ICO-backed loan their total drawn exposure in all financial transactions reported to the CCR with any system institution. If any of the customer's transactions are troubled (Stage 2 or non-performing) above a minimal materiality threshold, they are flagged as impaired. The proportion of the volume of ICO-backed loans associated with customers that have any such flag considering all their credit transactions is then calculated.
- b Includes, at each date, loans, with or without mortgage, with expired moratoria under the various programmes implemented since April 2020 to mitigate the effect of the COVID-19 pandemic. More than 80% of the loans with expired moratoria are mortgage loans.

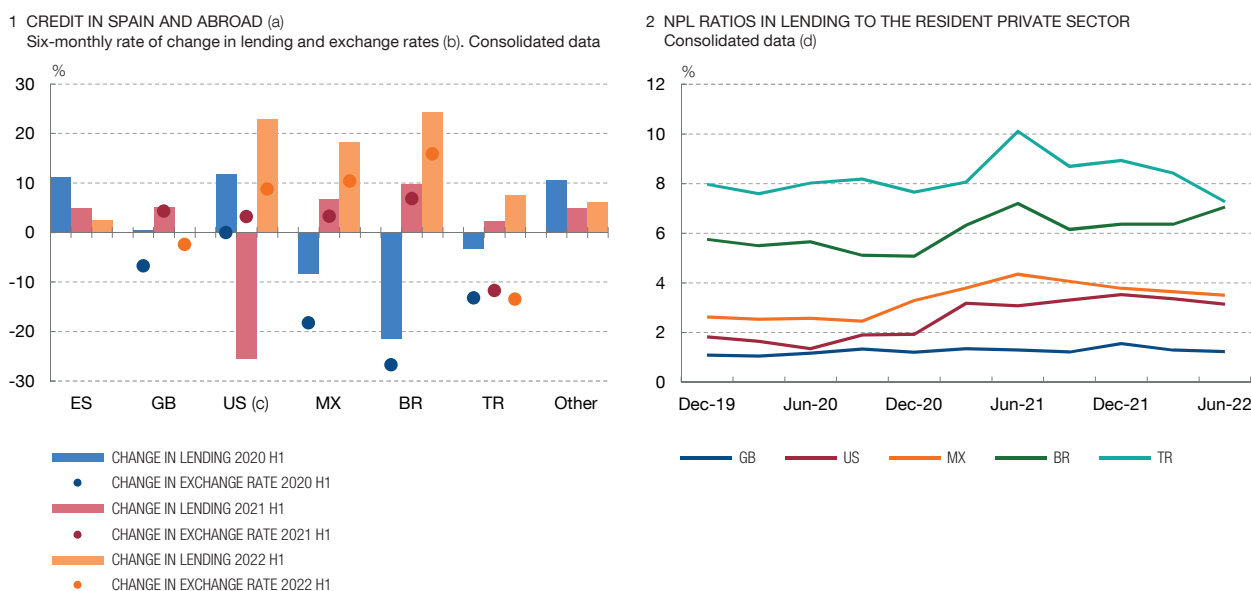
hand, and their credit quality, on the other. In the case of outstanding loans linked to expired moratoria, 10.7% were non-performing at June 2022, compared with 11.1% at December 2021, while 20.6% were classified as Stage 2 exposures at June 2022, up slightly from 20.2% at December 2021 (see Chart 2.4.2).

**The good credit quality performance in the first six months of the year enables the banking sector to face the present uncertain macroeconomic scenario from a better starting point, but it is not sufficient to rule out a poorer performance in the coming quarters.** For a comprehensive credit quality assessment, a forward-looking approach must be taken and its connection with the expected macroeconomic conditions – particularly GDP and interest rates, which are evolving unfavourably – considered. Box 2.2, which presents the results of the Banco de España's stress tests in the event of severe worsening of the macroeconomic situation, beyond the core expectations, notably considers the credit quality

Chart 2.5

**LENDING ABROAD EXPANDED IN THE FIRST HALF OF 2022, ASSISTED BY THE DEPRECIATION OF THE EURO AGAINST OTHER CURRENCIES, WHILE THE NPL RATIOS OF THESE EXPOSURES REMAINED CONTAINED**

Spanish deposit institutions' business abroad grew by 8.3% between December 2021 and June 2022. The first half of the year saw strong lending growth in the United States, Mexico and Brazil, but a slowdown in the United Kingdom. The depreciation of the euro against the currencies of several of the main countries that account for the bulk of the business abroad was conducive to this expansion. NPL ratios have fallen in recent quarters in the main foreign markets where Spanish banks operate, save in Brazil.



SOURCES: Datastream and Banco de España.

- a Includes all loans and advances in local and non-local activity in each country (central banks, general government, credit institutions, other financial corporations, NFCs and households).
- b A positive sign in the change in the exchange rate denotes currency appreciation against the euro.
- c The extremely negative value of the change in lending in the United States in 2021 H1 is due to a divestment made by a bank.
- d These ratios are slightly higher than those presented in previous FSRs as they refer to the total resident private sector in each country, thus excluding central banks, general government and credit institutions, which generally have very low NPL exposures and were included in the calculation of NPL ratios in previous FSRs. This aligns the FSR with the changes made by the ECB in its publications.

impairment channel within a broader assessment of the degree of overall solvency of the banking sector.

**The volume of Spanish deposit institutions' business abroad rose by 8.3% in the first half of 2022.** This is higher than in the first half of 2021 (1.1%). Compared with the changes observed in the first six months of recent years, credit volume saw strong growth in the United States (23%), Mexico (18.3%) and Brazil (24.4%), largely as a result of exchange rate fluctuations in those countries' currencies against the euro (see Chart 2.5.1). As flagged in previous FSRs, Spanish banks' net non-local currency position in the emerging market economies where they operate is low, which in any event mitigates the financial risk of exchange rate fluctuations. NPL ratios in lending to the resident private sector in the different countries in which Spanish deposit institutions operate generally fell in the 12 months to June 2022, save in Brazil (see Chart 2.5.2).

**The Eurosystem's balance sheet has remained stable in recent months, in line with central banks' monetary policy normalisation strategy.** The volume of the purchase programmes has increased slightly (by €31 billion) since the cut-off date of the last FSR, although only up to June, when the ECB announced that it would end its net purchases. Also, some early redemptions, totalling €83 billion, have been made under TLTRO III. European banks' surplus liquidity has risen by €113 billion, with a transfer from the current accounts banks hold at the central bank to the deposit facility, which following the monetary policy rate hikes is now paying interest (see Chart 2.6.1).

**The recent monetary policy rate hikes have been passed through to money market rates.** The euro area short-term rate (€STR)<sup>5</sup> has moved in line with the respective 50 bp and 75 bp policy rate hikes made in July and September.<sup>6</sup> Yet these moves have still not been fully passed through to repo rates,<sup>7</sup> in a setting in which a scarcity of collateral is exerting downward pressure on interest rates in this segment. The ECB has decided to temporarily remove the interest rate ceiling for remuneration of general government deposits,<sup>8</sup> to safeguard effective monetary policy transmission and orderly market functioning, against a backdrop of money market adjustment to the return of positive interest rates (see Chart 2.6.2). On the interbank market, the 3-month EURIBOR has also been marked by the recent interest rate rises and expectations of further rate hikes.

**Spanish banks' wholesale market funding costs for the different debt instruments have continued to rise in recent months.**<sup>9</sup> The monetary policy rate hikes<sup>10</sup> in 2022 have contributed to the increase in the returns demanded on bank debt on the secondary market, most notably in the case of senior debt instruments. Specifically, during 2022, the correlation between the return demanded on senior debt instruments and the risk-free rate (OIS) has been over 95%. Meanwhile, returns on contingent convertible debt instruments (CoCos) have posted lower growth and are below the levels observed during the pandemic (see Chart 2.6.3).

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5 The €STR reflects the unsecured overnight borrowing costs of euro area banks. Both the interest rate and the volume traded are calculated and published each business day by the ECB, drawing on the information provided by the 48 euro area banks subject to *Money Market Statistical Reporting* (MMSR) requirements.

6 On 21 July the ECB announced a rate rise of 50 bp, with effect from 27 July, followed on 8 September by a rate rise of 75 bp, with effect from 14 September.

7 Calculated as the overnight rates on transactions made by banks subject to MMSR requirements using as collateral debt issued by Spanish, German, Italian and French general government agencies.

8 Before the September 2022 announcement, the interest rate applied to these deposits was the €STR or the deposit facility rate (DFR), whichever was lower, up to a maximum of 0%.

9 Secondary debt market prices provide a measure of the implicit cost of wholesale funding for banks, even if there are no active issues at all dates. This funding cost is the average yield traded on the secondary market for the different types of bonds issued by listed banks.

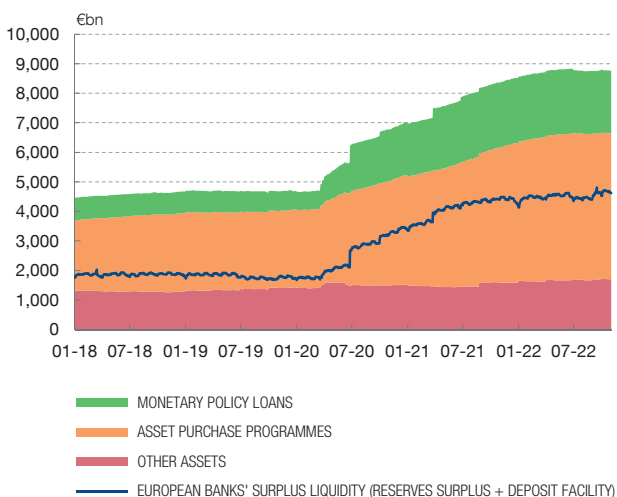
10 The benchmark rate is the risk-free rate (OIS) at the same term as the unsecured debt portfolio, which represents banks' highest issuance volume and outstanding debt.

Chart 2.6

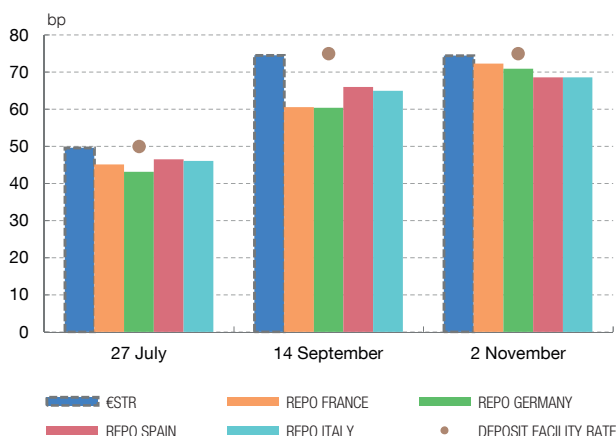
**MONETARY POLICY TIGHTENING HAS STEADIED THE ECB'S BALANCE SHEET, ALTHOUGH IT REMAINS WELL ABOVE ITS PRE-PANDEMIC LEVEL, WHILE THE INTEREST RATE RISES HAVE PARTIALLY PASSED THROUGH TO THE MONEY MARKETS AND WHOLESALE FUNDING**

On the money markets, the policy rate rises have passed through fully to the euro area short-term rate (€STR) in the unsecured segment, but only partially to repo rates. Expectations of higher interest rates have also contributed to the rising cost of Spanish bank debt on the secondary market. Spanish banks have been very active in the debt issuance market, considering the potentially higher future costs and the need to meet regulatory requirements.

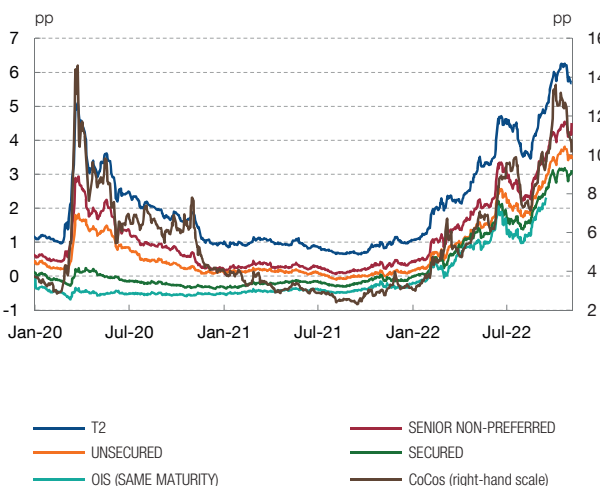
1 EUROSISTEM BALANCE SHEET AND EUROPEAN BANKS' SURPLUS LIQUIDITY



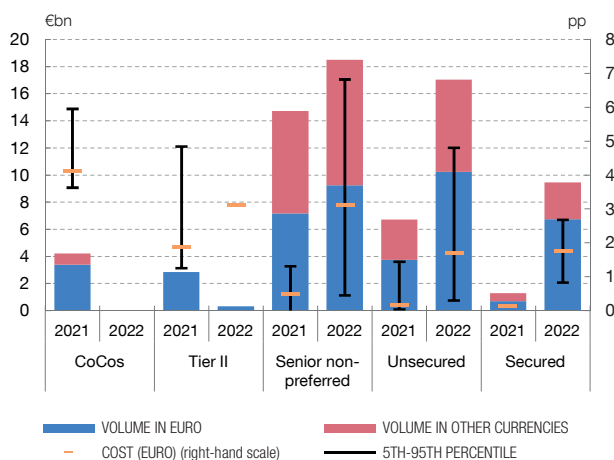
2 CHANGE IN MONEY MARKET RATES (a)



3 COST OF WHOLESALE BANK DEBT. SECONDARY MARKET. SPANISH BANKS (b)



4 ISSUANCE VOLUME AND COST BY INSTRUMENT TYPE. JAN-OCT 2021 vs JAN-OCT 2022. SPANISH BANKS (c)



**SOURCES:** Bloomberg, Dealogic, Thomson Reuters, MMSR and Banco de España.

- a** Intraday change on the day of the policy rate hikes (July, September and November) in the €STR and in overnight rates on transactions made by banks subject to MMSR requirements using as collateral debt issued by Spanish (ES), German (DE), Italian (IT) and French (FR) general government agencies.
- b** The cost is calculated as the weighted average by volume of the yield traded on the secondary market for the different types of bonds issued by listed banks. The OIS (Overnight Indexed Swap) at the same term as the average of the average unsecured debt maturity is shown. CoCos: debt qualifying as Tier 1 (contingent convertible debt); T2: debt qualifying as Tier 2; SNP: senior non-preferred debt (MREL-eligible).
- c** The cost of primary market issuance of euro-denominated bonds, comparing the period Jan-Oct 2021 and Jan-Oct 2022. In some categories the 5th-95th percentile range is not shown because there has been only one issue in the period.

**Spanish banks have substantially reduced their subordinate debt (CoCos and Tier 2) issuance in 2022, and have increased their senior non-preferred (SNP) debt issuance.** Spanish banks' subordinate debt issuance has decreased, largely because they had already reached the volumes required by prudential regulations in their previous years' issuance, and because these kind of instruments entail a relatively higher cost. The increase in SNP debt issuance<sup>11</sup> is in line with Spanish banks' need to comply with their supervisors' MREL requirements. More banks<sup>12</sup> have been able to issue SNP debt, which is less costly than the alternatives available to comply with MREL requirements (see Chart 2.6.4).

**In a context in which central banks are lending less and interest rates are rising, the volume of senior debt issued by the banking sector has increased, with higher issuance costs.** In the first nine months of 2022, the wholesale debt market was busier than in the same period of 2021. This can be attributed to an increase in the issuances of both secured senior debt and unsecured debt. These types of issuance enable banks to finance their activity as the end of the Eurosystem's refinancing operations (TLTRO III), whose funding terms were recently amended, approaches.<sup>13</sup> Moreover, the new debt has been issued at a higher cost, with greater heterogeneity across banks and in terms of issuance dates. The market has been particularly active since July; thus, September saw around a quarter of all of the debt issuances made in the year overall. This, despite the fact that the cost of issuing debt has risen (see Chart 2.6.4), with a higher risk premium than at the start of the year, coinciding with the recent interest rate hikes. Nonetheless, this can be explained in part by the fact that central banks are expected to increase rates further in the coming months,<sup>14</sup> and that banks are looking to raise funds before this happens.

**In terms of the conditions for issuing bank debt, the covered bond regulation and supervision regime has recently been strengthened under Royal Decree-Law 24/2021.** Under this legislation,<sup>15</sup> which transposes European regulations and is a highly significant change for the Spanish market, an institution issuing these financial instruments must keep a special register of the pool of assets that serve as collateral vis-à-vis bond-holders throughout the bonds' lifetime. Such collateral must be enforceable even in the event of insolvency or resolution of the issuing credit institution. The new regulation also requires that a buffer of highly liquid assets

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11 SNP debt was approved by law in 2017 and allows banks to comply with the minimum requirement for own funds and eligible liabilities (MREL).

12 In previous years, most SNP debt issues were made by the big listed banks.

13 Moreover, on 27 October, the ECB's Governing Council resolved to recalibrate the applicable interest rates. From 23 November 2022, the interest rate applicable to TLTRO III operations will be indexed, up to maturity or early repayment, to average applicable key ECB interest rates.

14 Rate expectations based on financial derivatives (OIS) suggest that the euro area terminal rate (i.e. the level monetary policy rates are expected to reach once the hiking cycle ends) could be as high as 3%.

15 [Royal Decree-Law 24/2021](#) of 2 November 2021, transposing [Directive \(EU\) 2019/2162](#) of the European Parliament and of the Council of 27 November 2019 on the issue of covered bonds and covered bond public supervision and amending Directives 2009/65/EC and 2014/59/EU.

be maintained to cover a potential net outflow of funds linked to covered bonds during 180 days.

**The more stringent covered bond supervision regime is expected to affect banks' internal controls and the oversight carried out by the Banco de España.** First, issuing banks will have to appoint a body to oversee the pool of collateral, ensuring compliance with the statutory and contractual requirements of the issuance, including supervision of any additions to or eliminations from the cover pool. Meanwhile, the Banco de España's supervisory functions will take in everything from authorising the oversight body to approving each individual covered bond issuance programme.

**Deposits of households and NFCs account for a relatively large share of Spanish banks' liabilities compared with their European counterparts.** According to the consolidated EBA data at June 2022, deposits of households and NFCs account for 36% and 15%, respectively, of the total liabilities of Spain's main banks, and thus constitute their main source of funding (51% overall). At European level, while deposits of households and NFCs fall short of the levels seen in Spain, they nonetheless have a key role to play in banks' funding structure, accounting for between 28% (Germany) and 50% (the Netherlands) of total liabilities (see Chart 2.7.1).

**Sight deposits make up the bulk of the deposits taken in Spain, where the loan-to-deposit ratio is currently low.**<sup>16</sup> In June 2022, as a result of the low interest rate setting of recent years, term deposits accounted for just 6.6% of total deposits, as compared with 40% in June 2005 and 55.4% in June 2011. Low interest rates have not deterred strong deposit growth in recent years, which has contributed to a very significant decline in the loan-to-deposit ratio of households and NFCs, down from 129% in June 2008, before the onset of the global financial crisis, to 74.2% in June 2022 (see Chart 2.7.2).

**The level of pass-through of the recent rise in the 12-month EURIBOR to Spanish banks' deposit rates has so far been very small, and lower than on previous occasions.**<sup>17</sup> The last 18 years have seen a close correlation between deposit rates and the 12-month EURIBOR, albeit with differences depending on term and counterparty (see Chart 2.7.3). However, the cumulative 325 bp rise in the 12-month EURIBOR recorded in the first nine months of 2022 has not passed through to interest rates on households' sight or term deposits to any appreciable degree. As far as businesses are concerned, while a degree of pass-through can be seen in

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16 This analysis is based on data drawn from the regulatory information on interest rates that Spain's main banks must report to the ECB every month.

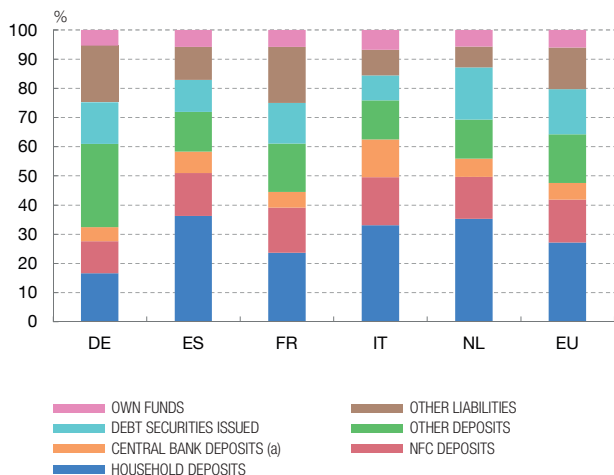
17 Based on the average interest rates on the outstanding balances of deposits as reported to the ECB, an econometric analysis has been conducted using a vector autoregressive model to explain the changes as a function of the 12-month EURIBOR and other macroeconomic variables. This modelling enables predictions to be made regarding the expected changes in commercial deposit rates based on a projected path for the 12-month EURIBOR and the other macroeconomic variables

Chart 2.7

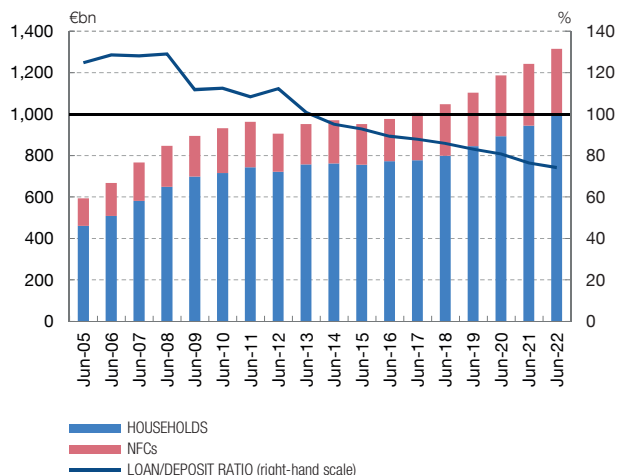
**DEPOSITS OF HOUSEHOLDS AND NFCs CONSTITUTE THE MAIN COMPONENT OF SPANISH BANKS' LIABILITIES; SO FAR INTEREST RATE HIKES HAVE BARELY PASSED THROUGH TO THE COST OF THESE DEPOSITS**

Deposits of households and NFCs constitute the main source of funding of Spanish banks and, to a lesser extent, their counterparts in Europe. In Spain, these deposits have seen significant growth in recent years, despite the low interest rate setting, which has led to a preponderance of sight over term deposits. Unlike in past rate hike cycles, the recent rise in reference interest rates has not yet passed through to commercial deposit rates.

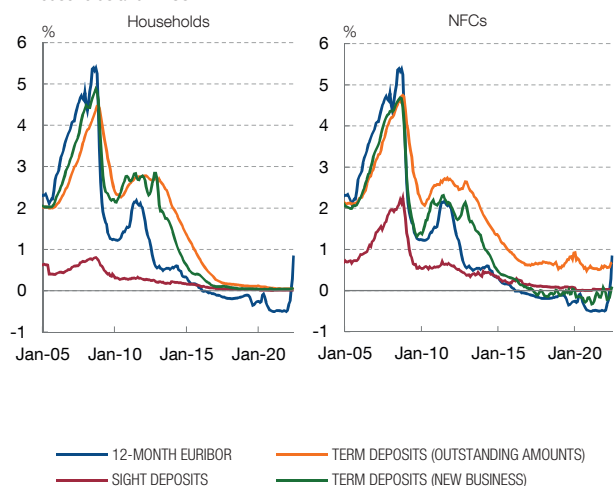
1 COMPOSITION OF LIABILITIES. EUROPEAN COMPARISON  
Consolidated data, June 2022



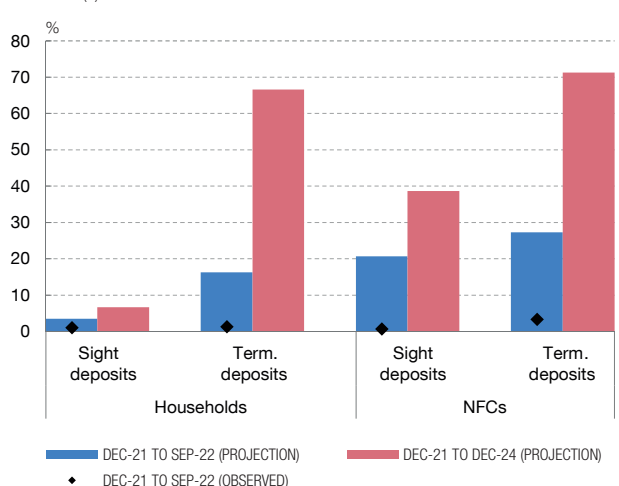
2 DEPOSITS OF HOUSEHOLDS AND NFCs AND THE LOAN/DEPOSIT RATIO (b)  
Business in Spain, ID



3 DEPOSIT INTEREST RATES AND THE 12-MONTH EURIBOR  
Households and NFCs



4 PASS-THROUGH OF AN INCREASE IN EURIBOR TO DEPOSIT INTEREST RATES (c)



SOURCE: EBA, ECB and Banco de España.

- a Estimated based on the volume of central bank deposits (euro area) reported by all banks in each country and the proportion that the sample of banks included in the EBA's Risk Dashboard represents at consolidated level over the total system in terms of assets.
- b The loan/deposit ratio includes only loans and deposits of households and NFCs.
- c Pass-through is defined as the ratio of the cumulative change (in pp) in the commercial interest rate to the change in the 12M EURIBOR in the period considered. The changes in the commercial interest rates have been projected using a multivariate structural VAR model estimated using the information from the interest rate statements reported to the ECB, to which the projections on the 12M EURIBOR and other macroeconomic variables published by the Banco de España in October 2022 have been applied.

the case of term deposits, it has been very limited. Nevertheless, the pass-through from reference rates to deposit rates could gather pace in the coming months. Thus, the expected level of pass-through based on time series modelling is likely to be very low in the case of households' sight deposits (barely 7%), to approach

40% in the case of NFCs' sight deposits and to be around 70% for the term deposits of both households and NFCs (see Chart 2.7.4). The greater degree of pass-through to term deposit rates is also expected to lead to a shift in the balance between sight and term deposits, a process that has yet to begin to any meaningful extent.

## 2.1.2 Profitability and solvency

### *Profitability*

**In the first half of 2022, the Spanish banking sector posted consolidated net profit of €12.5 billion, spurred on by higher ordinary profit.** Although the half-yearly net profit at June 2022 was down 9.3% year-on-year (see Annex 2), the June 2021 figure was skewed by the extraordinary profit<sup>18</sup> recognised in that period (see Chart 2.8.1<sup>19</sup>). Thus, setting such extraordinary profits aside, net profit in June 2022 was up 16.3% on the previous year. The net profit realised translates into a return on assets (ROA) of 0.61% (down 0.1 pp<sup>20</sup> from 0.71% in 2021) and a return on equity (ROE) of 10% (down 1.2 pp from 11.2% in June 2021). Excluding extraordinary items, ROA in June 2022 would have stood at 0.62% (up 0.06 pp from 0.56% in June 2021, see Chart 2.8.2), and ROE at 10.1% (up 1.3 pp from 8.9% in June 2021). Thus, banks' profits exceeded their cost of capital, which stood at around 7% in the first half of 2022. Based on the earnings reported by the listed banks in recent weeks, this positive performance appears to have continued through 2022 Q3.

**Overall, the ROA of Europe's leading banking systems at June 2022 outperformed the average for the last two years, approaching the pre-pandemic figure.** Together with its Italian counterpart, the Spanish banking sector's ROA was the highest of the main European countries, and stood above the euro area average (see Chart 2.9.1).

**Meanwhile, the earnings abroad of Spanish banks with more significant international operations improved year-on-year in 2022 H1.** This improvement

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18 In 2021 H1 extraordinary gains were recognised as a result of a merger (whose net value stood at €2.9 billion: negative goodwill (€4.3 billion) plus a corporate income tax benefit (€0.6 billion), less extraordinary operating expenses stemming from the labour agreement and other integration costs (€2 billion)); the spin-off of an insurance company (€0.9 billion); the earnings of a US bank up until its sale on 1 June 2021 (€0.3 billion) and restructuring costs at the two main banks (-€1.2 billion). In 2022 H1 extraordinary losses were recognised as a result of the offices purchased by one bank (-€0.2 billion).

19 The ROA distribution at June 2021 showed two sets of abnormally high profits corresponding to the extraordinary gains of two banks, so a sizeable portion of the ROA distribution at June 2022 therefore stands to the right (i.e. recording a higher ROA) of the distribution at June 2021. Moreover, the ROA distribution across banks at June 2022 was concentrated at higher levels than in the period immediately preceding the pandemic (see Chart 2.8.1).

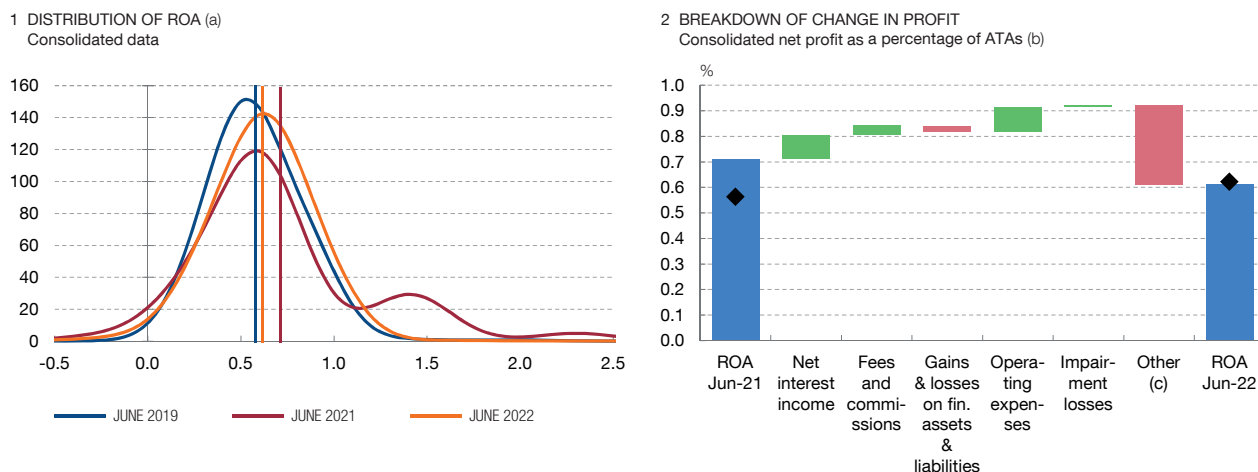
20 This negative year-on-year difference has widened due to the increase in average total assets (see Annex 1, showing the year-on-year change in total assets, a variable that is closely related, albeit not identical, to average total assets), which grew by 5.4% between June 2021 and June 2022. The same is true for ROE, albeit to a lesser degree since the year-on-year increase in average equity was considerably lower (1.6%).



Chart 2.8

### THE SPANISH BANKING SYSTEM'S ORDINARY PROFIT IN 2022 H1 INCREASED WITH RESPECT TO 2021

While the sector's net profit fell in the first half of 2022, this was due to the extraordinary profits recognised in 2021 H1, without which profitability would have risen. The ROA distribution across banks at June 2022 was concentrated at higher levels than in the period immediately preceding the pandemic. This improvement was largely due to the increases (in excess of 10%) in net interest income and fee and commission income. Impairment losses in the sector as a whole held relatively stable with respect to 2021.



SOURCE: Banco de España.

- a The chart depicts the density function of ROA for Spanish deposit institutions, weighted by average total assets. The density function is estimated by means of a kernel estimator, which enables non-parametric estimation and provides a continuous, smoothed graphic representation of the function. The vertical lines denote the average weighted ROA of the Spanish banking system as a whole in June 2019 (blue), June 2021 (red) and June 2022 (orange).
- b The red (green) colour of the bars denotes a negative (positive) contribution of the corresponding item to the change in consolidated profit in June 2022 compared with June 2021. The black diamonds denote the ROA excluding extraordinary items. Specifically: in June 2021, extraordinary gains as the result of a merger (€2.9 billion), the spin-off of an insurance company (€0.9 billion), the earnings of a US bank up until its sale on 1 June 2021 (€0.3 billion) and extraordinary restructuring costs (-€1.2 billion); and in June 2022, the net impact of a purchase of offices by one bank (-€0.2 billion).
- c Including, among others, the aforementioned extraordinary items.

extended to most of the key regions in which they operate, with the exception of the USA and Turkey, with Mexico seeing the biggest rise in profits (see Chart 2.9.2).

**The increases in net interest income and fee and commission income were the main drivers of the positive profit performance in 2022 H1.** At June 2022, net interest income and fee and commission income at the consolidated level had risen year-on-year at the same rate (11.2%).

**The improvement in net interest income is due to a price effect and, above all, a quantity effect.**<sup>21</sup> June 2021 to June 2022 saw the reversal of the downward trend

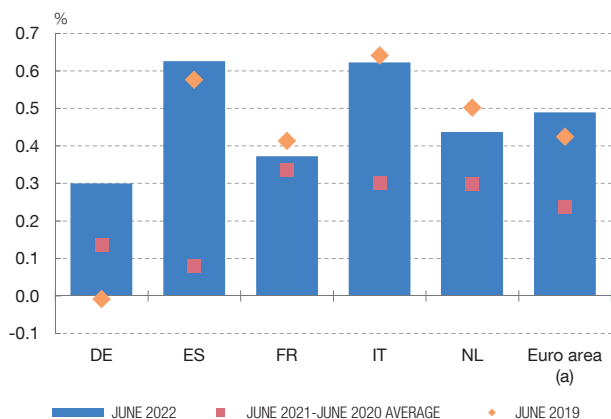
21 The quantity effect is calculated as the product of the change in investments (in the case of income) or funding (in the case of expenses) and the return (income) or cost (expenses) held constant at the values of the initial period. The price effect is calculated as the product of the change in return (income) or cost (expenses) and the investments (income) or funding (expenses) held constant at the initial period values. Once the price and quantity effects on interest income and expenses have been calculated, the effects on net interest income are calculated as the difference between the two.

Chart 2.9

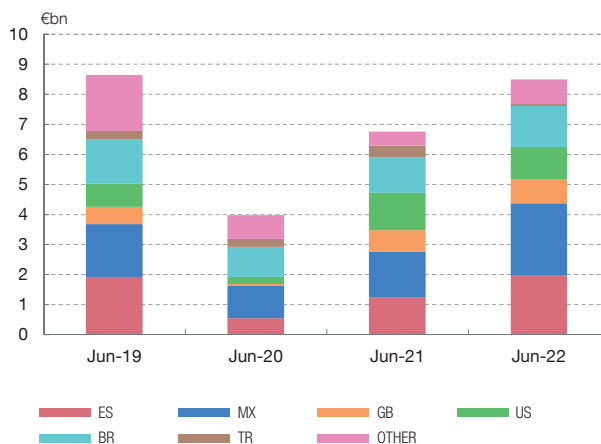
**THE ROA OF THE BANKS IN THE MAIN EUROPEAN COUNTRIES STOOD AT PRE-PANDEMIC LEVELS IN 2022 H1, WHILE SPANISH BANKS' EARNINGS ABROAD CONTINUED TO PERFORM WELL**

In 2022 H1, the ROA of the main European banking systems outperformed the average for the past two years, and was similar to pre-pandemic levels, with Spain (together with Italy) posting the highest figure. Meanwhile, Spanish banks' earnings at June 2022 rose in most of the countries in which they operate, with the United States and, in particular, Turkey, the only countries in which profits fell, while Mexico saw the largest increase.

1 RETURN ON ASSETS (ROA)  
Consolidated data



2 GEOGRAPHICAL DISTRIBUTION OF ORDINARY PROFIT ATTRIBUTABLE TO THE PARENT OF BANKS WITH MORE SIGNIFICANT INTERNATIONAL ACTIVITY (b)  
Consolidated data



SOURCES: EBA and banks' financial reporting.

- a The average ROA of the euro area is calculated using the individual ROA data for each country contained in the EBA's Risk Dashboard, weighting each country by its total assets (a figure also drawn from the Risk Dashboard).
- b Among the banks with significant international activity, this group includes the three in which such activity is more important and more extended in time, and non-recurring items in the period considered are excluded.

in net interest income seen in the two preceding years (see Chart 2.10.1). The increase in consolidated net interest income of over €3.5 billion was partly due to the price effect, with the positive impact of the interest rate hike on income outweighing the negative impact associated with expenses. To an even greater extent, the quantity effect also contributed to the improvement in net interest income, owing in part to the appreciation against the euro of some of the currencies of the main countries in which Spanish banks operate. Chart 2.10.2 depicts the correlation between the year-on-year change in net interest income (as a percentage of ATA) and ROA, showing how this correlation was more positive in the first half of 2022 than in the preceding years. By contrast, net interest income from business in Spain fell, since the price effect (negative) outweighed the quantity effect (positive). Net interest income is also expected to grow in Spain in the coming quarters as a result of the repricing of variable rate loans (and new lending at higher rates) due to the increase in the EURIBOR in recent months. However, this growth may be partially offset by a fall in volumes in the event of an economic slowdown.

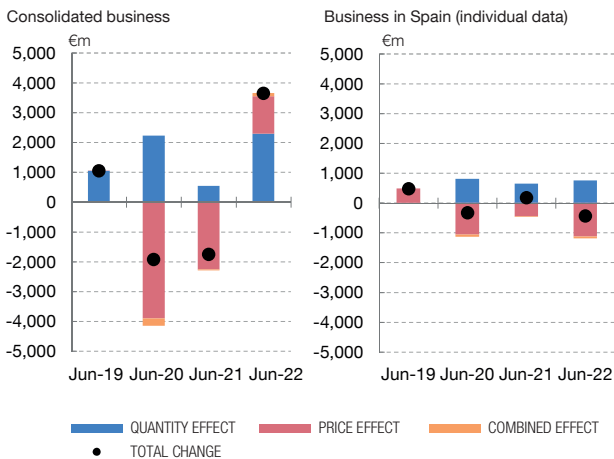
**Operating expenses fell slightly, thus boosting net operating income, although excluding the extraordinary items in 2021 this expenditure item increased.**

Chart 2.10

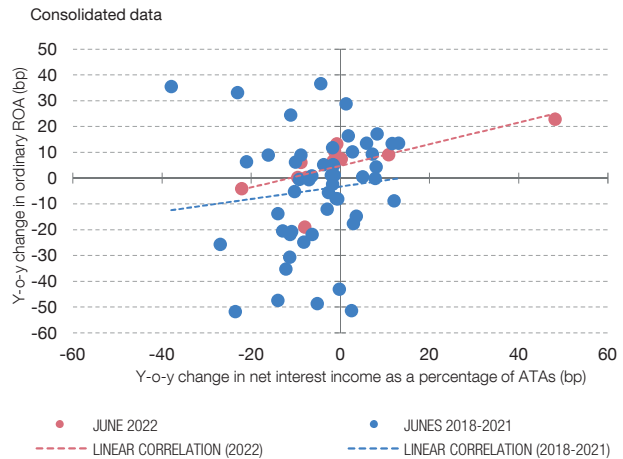
**IN 2022 H1 CONSOLIDATED NET INTEREST INCOME INCREASED MARKEDLY WITH RESPECT TO PREVIOUS YEARS, CONTRIBUTING NOTABLY TO THE POSITIVE ROA PERFORMANCE**

At consolidated level, the improvement in net interest income is due to a price effect and, above all, a quantity effect. The positive correlation observed in 2022 H1 between the change in net interest income and the change in net profitability was more marked than in recent years. By contrast, net interest income from business in Spain fell, since the negative price effect outweighed the positive quantity effect.

1 BREAKDOWN OF CHANGE IN NET INTEREST INCOME (a)



2 CORRELATION BETWEEN THE CHANGE IN NET INTEREST INCOME AS A PERCENTAGE OF ATAs AND THE CHANGE IN ORDINARY ROA (b)



SOURCE: Banco de España.

- a The quantity effect is calculated as the product of the change in investments (in the case of income) or funding (in the case of expenses) and the return (income) or cost (expenses) held constant at the values of the initial period. The price effect is calculated as the product of the change in return (income) or cost (expenses) and the investments (income) or funding (expenses) held constant at the initial period values. The combined effect is a residual calculated as the difference between the total change and the sum of the price and quantity effects. The effects on net interest income are calculated as the difference between the effects on interest income and interest expense.
- b The x-axis depicts the year-on-year change (in bp) in net interest income as a percentage of average total assets, and the y-axis the year-on-year change (in bp) in ROA. When calculating the ROA of banks with significant extraordinary items in the period under consideration, these items are excluded from net profit so as not to distort the analysis. Each dot represents a bank and a year. Included are the banks directly supervised by the SSM and an aggregate including all other banks. The period considered runs from 2018 to 2021 (blue dots) and 2022 (red dots). Also shown are the OLS-adjusted linear correlations.

Despite the fall in net trading income, the growth in net interest income and fee and commission income referred to above led to a year-on-year rise in gross income of around 8%. Operating expenses fell slightly, in large part thanks to a base effect due to the extraordinary operating expenses recognised in 2021 H1 (see footnote 18). Without such extraordinary expenses, operating expenses would have risen by 6% and the increase in net operating income (18%, see Annex 2) would have been smaller, around 10%. Looking ahead, the extent to which high inflation shapes wage bargaining in the banking sector and, by extension, labour costs, will have to be monitored.

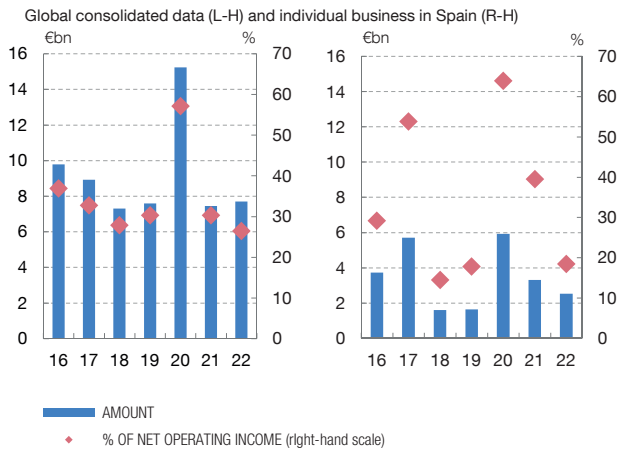
**While impairment losses at consolidated level held relatively stable compared with June 2021, the materialisation of the macroeconomic risks identified in this report could give rise to additional provisioning needs in the coming years.** In 2021 these consolidated losses were already at a level similar to the level in the years leading up to the pandemic. In business in Spain, the decline in impairment losses with respect to June 2021 also allowed for a return to pre-pandemic levels by June 2022 (see Chart 2.11.1). At individual bank level, the increase in ordinary ROA recorded in June 2022 was not associated with a fall in impairment losses, unlike in recent years

Chart 2.11

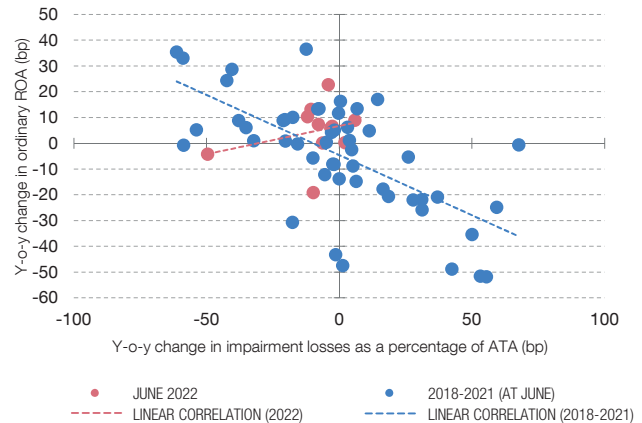
**IMPAIRMENT LOSSES HELD RELATIVELY STABLE WITH RESPECT TO JUNE 2021 AND THEIR IMPACT ON BANKS' PROFITS WAS SMALLER THAN IN RECENT YEARS**

At consolidated level, impairment losses held relatively stable with respect to 2021 H1 and at a level similar to June 2018 and June 2019, while impairment losses from business in Spain fell with respect to June 2021. The increase in ROA (excluding extraordinary items) recorded in June 2022 was not associated with a decline in impairment losses, unlike in recent years when impairment losses had a markedly negative impact on profitability. Estimated additional provisioning needs in the coming years are heterogeneous across banks and depend, among other factors, on the degree of credit impairment of the ICO-backed loan portfolio.

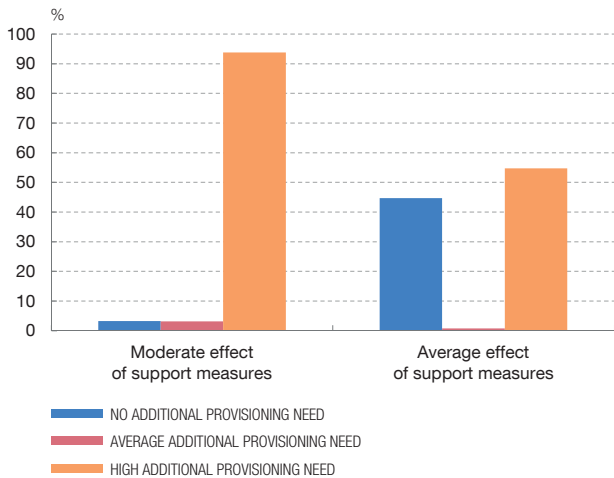
1 IMPAIRMENT LOSSES



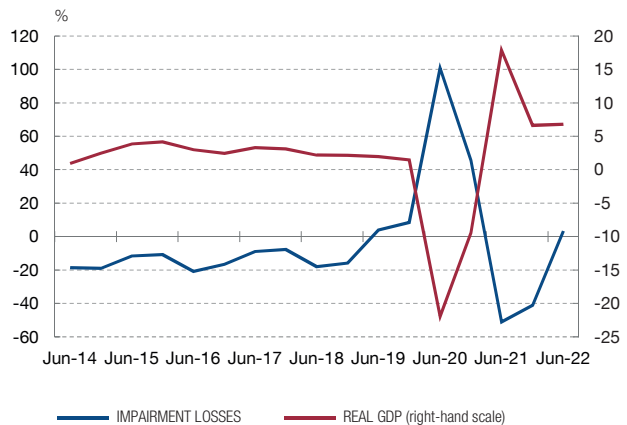
2 CORRELATION BETWEEN THE CHANGE IN IMPAIRMENT LOSSES AS A PERCENTAGE OF ATA AND THE CHANGE IN ORDINARY ROA (a) Consolidated data



3 PROPORTION OF BANKS WITH ESTIMATED PROVISIONING NEEDS, 2022-2024 Business in Spain. Estimated using the FLESB framework (b)



4 YEAR-ON-YEAR CHANGES IN IMPAIRMENT LOSSES AND IN GDP



SOURCES: Banco de España and INE.

- a The x-axis depicts the year-on-year change (in basis points) in impairment losses as a percentage of average total assets, and the y-axis depicts the year-on-year change (in basis points) in ROA. When calculating the ROA of banks with significant extraordinary items in the period under consideration, extraordinary items are excluded from the net profit so as not to distort the analysis. Each dot represents a bank and a year. Included are the banks directly supervised by the SSM and an aggregate including all other banks. The period considered runs from 2018 to 2021 (blue dots) and 2022 (red dots). Also shown are the OLS-adjusted linear correlations.
- b The estimated provisioning charges for the period 2022-2024 are obtained from the baseline scenario used in the FLESB stress-testing exercise. Banks are grouped into three categories, based on the volume of estimated provisioning charges relative to the 2022 provisioning effort. The bars depict the aggregate lending of each category of bank as a percentage of total lending. The first group (no additional provisioning need) comprises banks whose 2022 provisioning effort (those provisions recognised for 2022 H1, multiplied by two to extrapolate them for the entire year) is sufficient to cover the estimated provisioning requirements for 2022-2024 under the FLESB framework. The second group (average additional provisioning needs) is formed by banks whose provisioning effort in 2022 is between 50% and 100% of the provisioning charges estimated for 2022-2024. The third group (high additional provisioning needs) consists of banks whose provisioning charges in 2022 are below 50% of the provisioning charges estimated for 2022-2024. For the estimated provisioning over the entire 2022-2024 period, two scenarios are considered in relation to the effect of the support measures (essentially the ICO guarantee scheme): moderate and average. Under the moderate scenario, the quality of credit guaranteed by the ICO is similar to that of the overall business lending portfolio. Meanwhile, under the average scenario credit quality is at a midway point between the moderate scenario and a maximum scenario where the guarantees are used in full to absorb the poorest quality credit (see Box 2.2).

when there was a markedly negative correlation between rising impairment losses and changes in profitability (see Chart 2.11.2). The prospect of less favourable economic conditions means that some banks will have to record additional provisions in the coming years (see Chart 2.11.3). Moreover, the potential materialisation of the macro-financial risks identified in this report could notably increase the amount of such additional provisions (see Box 2.2). In particular, this would be the case in the event that such additional impairment mainly affected non-ICO-backed exposures. The scale of this additional effort is notably uneven across banks. Impairment losses behave in a markedly cyclical fashion (see Chart 2.11.4), so future developments will largely rest on the macroeconomic situation in the coming quarters.

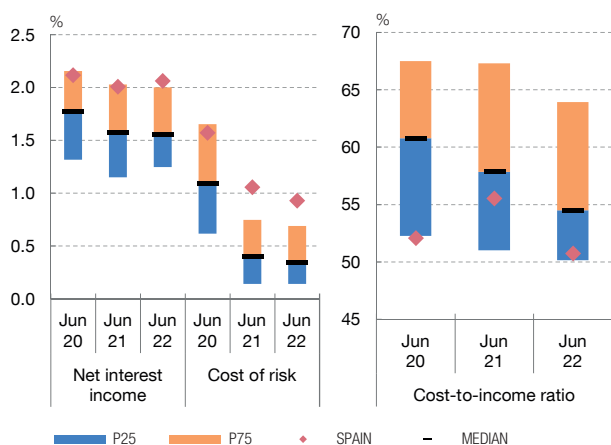
**Another key factor as regards the future profitability of the Spanish banking sector is the draft legislative proposal for a temporary levy that would shrink the sector's profits and hinder its capacity for organic capital generation in the coming years. The proposed measure<sup>22</sup> is expected to run from 2023 to 2024**

Chart 2.12

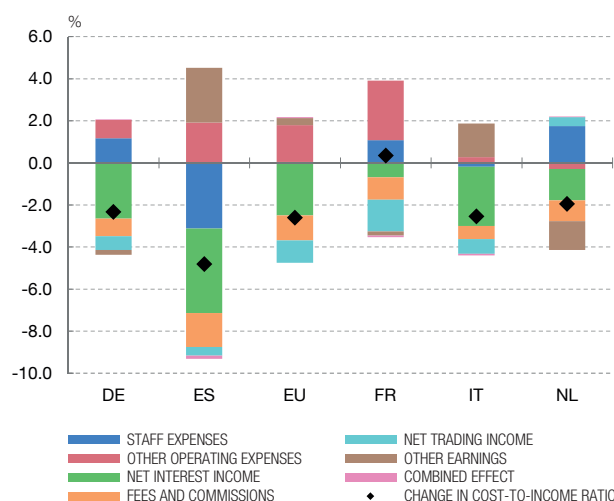
**VARIOUS COMPONENTS OF BANK PROFITABILITY PERFORMED POSITIVELY TO JUNE 2022 AT THE EUROPEAN LEVEL; THE SPANISH BANKS OUTPERFORMED THE AVERAGE**

Both the net interest income (on interest-earning assets) of the Spanish banking system and its cost of risk are among the highest in Europe. Its cost-to-income ratio is among the lowest (best) in Europe and has improved more year-on-year than in the case of the other main European countries, thanks to the increases in net interest income and fee and commission income and the base effect of the extraordinary expenses recorded in 2021 H1.

1 MAIN PROFITABILITY VARIABLES: A EUROPEAN COMPARISON (a)  
Consolidated data



2 BREAKDOWN OF CHANGE IN COST-TO-INCOME RATIO: A EUROPEAN COMPARISON, JUN-22 vs JUN-21 (b)  
Consolidated data



SOURCE: EBA.

- a Percentiles calculated drawing on the aggregate financial ratios published in the EBA's Risk Dashboard for each EU banking system. Net interest income is defined as interest income minus interest expenses (on interest-earning assets). Cost of risk is defined as impairment loss charges divided by gross lending. The cost-to-income ratio is defined as operating expenses divided by gross income, hence lower values indicate greater efficiency.
- b Note that negative variations in the cost-to-income ratio imply improvements. Positive (negative) contributions to the change in the components of the numerator indicate that they have increased (decreased) in the last year. Positive (negative) contributions to the change in the components of the denominator indicate that they have decreased (increased) in the last year. The combined effect is a residual calculated as the difference between the total change in the cost-to-income ratio and the sum of all the individual contributions.

22 See [Legislative Proposal 122/000247](#) to establish temporary levies on energy and on credit institutions and specialised lending institutions.

and would apply to banks exceeding a minimum interest income and fee and commission income threshold in 2019 set at €800 million. The tax rate would be 4.8% and the base would be the 2022-2023 net interest income and net fee and commission income taxable in Spain. Box 2.3 contains a more detailed description of this measure and of the opinion issued by the ECB on the implications of the levy.

**At the European level, the various components of bank profitability also performed positively up to June 2022, with Spanish banks outperforming the average.** In June 2022, the net interest income (on interest-earning assets) of the Spanish banking system and the cost of risk were both among the highest Europe-wide (see Chart 2.12.1). In the last year Spanish banks performed well in both metrics. The cost-to-income ratio was also among the lowest (best), and has improved faster year-on-year than in the main European countries (see Chart 2.12.2). This improvement is due to the above increases in net interest income and fee and commission income, and to the base effect of the extraordinary expenses recorded in 2021 H1.

### *Solvency*

**In June 2022, the common equity Tier 1 (CET1) ratio of Spanish banks was lower than in the same period a year earlier, mainly owing to the increase in risk-weighted assets (RWAs).** Following the year-on-year increases recorded in June 2020 (36 bp) and 2021 (83 bp), the CET1 ratio declined by 52 bp in June 2022 (see Chart 2.13.1). This fall was prompted by the 3.3% year-on-year rise in the ratio's denominator (RWAs), while the numerator (CET1) fell slightly (-0.7%). The increase in RWAs was widespread among banks, but not all reduced their CET1 (see Chart 2.13.2). Tier 1 capital and total capital ratios followed the same trend as the CET1 ratio, posting falls of 62 bp and 58 bp year-on-year, respectively. Box 2.2 sets out the results of the stress tests conducted by the Banco de España, which estimate the impact on the CET1 ratio of a potentially severe deterioration of the macroeconomic outlook which would significantly distance it from the core expectations.

**The Spanish banking system's resources to absorb expected and unexpected losses diminished in the 12 months to June with respect to asset size.** Chart 2.14.1 shows the availability of loss-absorbing resources estimated as the sum of the stock of provisions (for the expected component) and CET1 (for the unexpected component), measured in terms of total assets.<sup>23</sup> The decrease in available loss-absorbing resources over the year, following the increases observed between June

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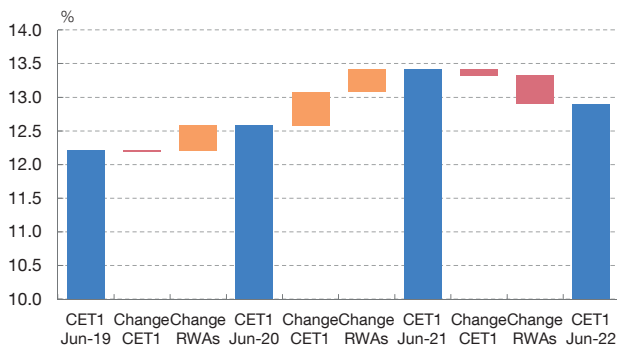
23 Given that the total assets on the balance sheet are net of credit impairment provisions, the total assets used as the denominator to express the availability of loss-absorbing resources (whose numerator includes the credit impairment provisions) in relative terms include the credit impairment provisions of all debt instruments. Using total assets as the denominator for this metric yields a conservative calculation, with a rationale comparable to that of the leverage ratio, since this variable does not distinguish between the different risk levels of these assets (unlike risk-weighted assets which do discriminate between these levels).

Chart 2.13

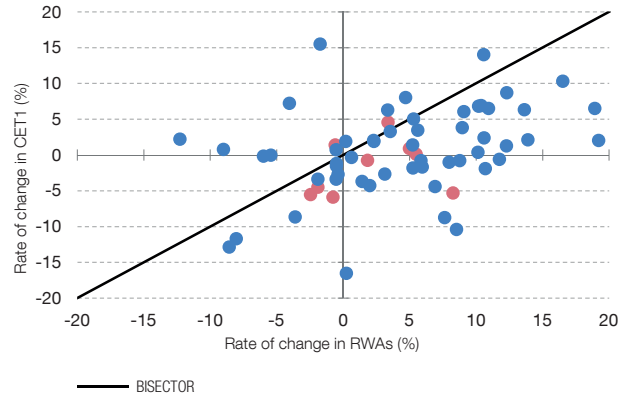
**THE INCREASE IN RISK-WEIGHTED ASSETS RESULTED IN A FALL IN THE CET1 RATIO IN JUNE 2022**

Following the year-on-year increases recorded in June 2020 (36 bp) and June 2021 (83 bp), the CET1 ratio of the Spanish banking sector declined (-52 bp) in June 2022. This fall was mainly due to the rise in RWAs (3.3%), which was widespread across banks, while CET1 fell slightly (-0.7%), with the number of banks at which CET1 increased similar to that at which it declined.

1 BREAKDOWN OF CHANGE IN THE CET1 RATIO BETWEEN JUNE 2019 AND JUNE 2022. CHANGE IN NUMERATOR AND DENOMINATOR  
Consolidated data



2 RATE OF CHANGE IN CET1 AND IN RWAs BETWEEN JUNE 2022 AND JUNE 2021 (a)  
Consolidated data



SOURCE: Banco de España.

a The red dots represent banks subject to direct SSM supervision. The dots above the bisector denote 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 June 2021 and June 2022. The reverse applies for the dots below the bisector.

2020 and June 2021, is attributable to the three components of this ratio. First, CET1 has fallen slightly over the year, as described above. Second, provisions also declined. The stock of credit impairment provisions fell by 6.1% year-on-year while other provisions did so by 25% (this decline was mostly accounted for by provisions for pensions). Third, total assets increased by 7.8%, to a greater extent than RWAs, leading to a lower RWA density and, consequently, a lower volume of unexpected losses as a proportion of total assets.

**The entry into force of binding regulatory requirements in 2022, along with the increase in RWAs and the slight decline in the volume of CET1, reduced the voluntary buffer in the 12 months to June.** The voluntary buffer (estimated as the volume of CET1 held by institutions above the regulatory minimum), which had increased between June 2019 and June 2021,<sup>24</sup> shrank in the last 12 months (see Chart 2.14.1). The entry into force of binding MREL requirements in 2022,<sup>25</sup> added to the factors mentioned above (slight decline in CET1 and increase in RWAs), reduced the voluntary

24 This increase between June 2019 and June 2020 was mainly due to the regulatory change (following the outbreak of COVID-19) which allowed part of Pillar 2 requirements to be covered with additional Tier 1 capital and Tier 2 capital, instead of with CET1, and to the decrease in RWAs (which reduced the related requirements); while the increase between June 2020 and June 2021 was not only due to the decline in RWAs but also to the increase in CET1.

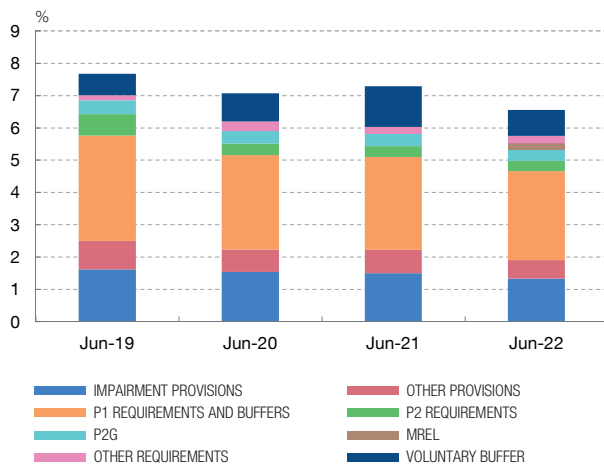
25 This analysis considers MREL requirements only since 2022, when they became binding for ten institutions. Before 2022 three institutions were subject to binding MREL, albeit only for a few months in 2020 in two cases.

Chart 2.14

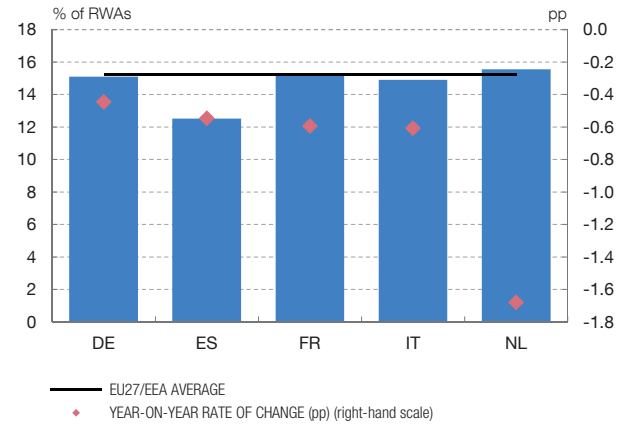
**THE SPANISH BANKING SYSTEM'S LOSS-ABSORBING RESOURCES DIMINISHED IN THE FIRST SIX MONTHS OF THE YEAR AS A PROPORTION OF TOTAL ASSETS. THE DIFFERENCE IN THE CET1 RATIO VIS-À-VIS THE EUROPEAN AVERAGE REMAINED UNCHANGED**

The entry into force of MREL requirements in 2022, along with the increase in RWAs and the slight decline in CET1, explain the year-on-year decrease in the voluntary buffer in June 2022. In addition, both credit impairment provisions and other provisions declined with respect to June 2021, reflecting the lower expected losses up to that date. All this against a backdrop of asset growth and diminished RWA density. The CET1 ratio of Spanish banks remains below that of banks from the other main European countries and the EU average, and this difference persisted over the year, owing to similar declines in the ratio in the main European countries.

1 BREAKDOWN OF CET1 CAPITAL AND PROVISIONS, AS A PERCENTAGE OF TOTAL ASSETS (a)  
Consolidated data



2 CET1 RATIO: EUROPEAN COMPARISON  
Consolidated data (b). June 2022



SOURCES: Banco de España and EBA.

- a In this chart the denominator is calculated as the sum of total assets on the balance sheet and the credit impairment provisions of all debt instruments, given that the total assets on the balance sheet are net of these provisions. "Other provisions" include provisions for pensions and other long-term employee benefits, provisions for legal issues, provisions for commitments and guarantees given, and other provisions. "P1 requirements and buffers" include Pillar 1 requirements and all buffers (capital conservation, countercyclical and systemic). "P2G" includes P2G capital guidance. "MREL" includes the MREL requirements which came into force in 2022. "Other requirements" includes the CET1 required to meet Tier 1 and Tier 2 capital requirements when additional capital is not sufficient to do so, and the leverage ratio requirements, which entered into force in 2021. Lastly, the "Voluntary buffer" is the amount of CET1 voluntarily held by banks above the regulatory minimum.
- b Data for the samples of the main banks in each country, in line with reporting to the EBA's Risk Dashboard.

buffer in June 2022 by close to €8.5 billion (representing 0.6% of CET1 at that date or, alternatively, 0.2% of total assets as defined in Chart 2.14.1 at the same date).

**The CET1 ratio of the Spanish banking sector, on June 2022 data, remains lower than the European average.** As shown in Chart 2.14.2, the differences observed in the CET1 ratio of Spanish banks vis-à-vis banks from the main European countries and the EU average persisted in the 12 months to June 2022, owing to similar declines in the ratios in the main European countries over this period.

### 2.1.3 Deposit institutions' operational risks

**Cyber risks are a cause for concern for banks, although the cost impact remains contained for now.** Cyber risks ranked high among the issues raised by

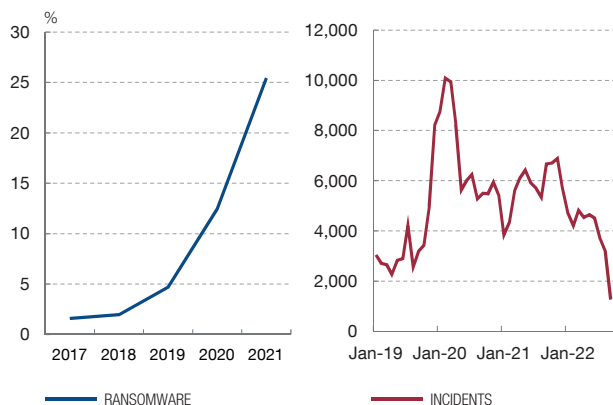


Chart 2.15

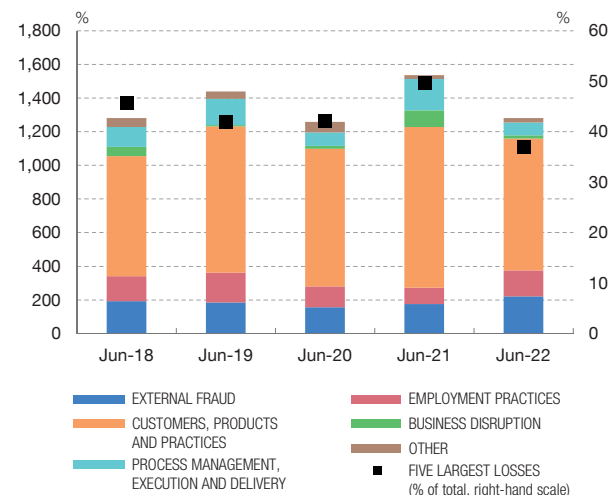
**FOR NOW, OPERATIONAL RISK LOSSES HAVE NOT BEEN SIGNIFICANTLY IMPACTED BY THE MATERIALISATION OF CYBER RISKS, WHICH KEEP THE BANKING SECTOR ON ALERT**

Spanish banks' operational risk conformed to the usual patterns, with a predominance of provisions for litigation and compensation in proceedings relating to services provided to customers. The alarm generated by the proliferation of cyber attacks has not yet materialised in any significant cyber incidents.

1 RATE OF GROWTH IN RANSOMWARE INCIDENTS WORLDWIDE (a) AND NUMBER OF CYBER ATTACKS ON STRATEGIC AND PUBLIC-SECTOR SYSTEMS IN SPAIN



2 NET OPERATIONAL RISK LOSSES Consolidated data. H1



SOURCES: Verizon Data Breach Investigation Report 2022 and CCN-CERT (Spain).

a Ransomware attacks are all those primarily designed for extortion purposes.

banks in the EBA's spring consultation on future operational risks. These responses revealed a concern that has been ever-present in recent years owing to the widespread alarm prompted by the countless cyber attacks occurring across economic sectors worldwide. A partial but very revealing indicator of the rise in threats is the global surge in ransomware incidents, i.e. attacks aimed at extortion (see Chart 2.15.1, left-hand panel). The geopolitics behind many of these attacks, combined with the escalation of geopolitical tensions at the start of the year, presaged a sharp rise in high-profile attacks on strategic sectors, including the financial sector. However, the rise in threats has yet to materialise, at least in the case of Spain<sup>26</sup> (see Chart 2.15.1, right-hand panel).

**Operational risk losses at Spanish banks continue to focus on the causes observed in previous years.** The events triggering the operational risk losses reported by Spanish banks in 2022 H1 conformed to the usual pattern (see Chart 2.15.2). The most significant contributions continue to be failures to comply with fiduciary duties to retail customers with judicial or similar consequences (61%), and external fraud incidents (17%). Deposit institutions have increased their provisions for future procedural issues and litigation concerning outstanding taxes

26 Within the crypto ecosystem, a relatively higher number of attacks has been observed. Chainalysis reported that in the first half of October 2022 alone, US\$ 718 million were stolen from DeFi protocols in 11 crypto hacks.

by 4.9% year-on-year. Such litigation includes complaints relating to the mortgage loan reference index, which have declined, while other complaints, including those relating to mortgage loan arrangement costs, floor clauses, multi-currency loans or revolving credit claims, have held at similar levels.

## 2.2 Non-banking financial sector and systemic interconnections

### 2.2.1 Non-banking financial sector

#### *Specialised lending institutions*

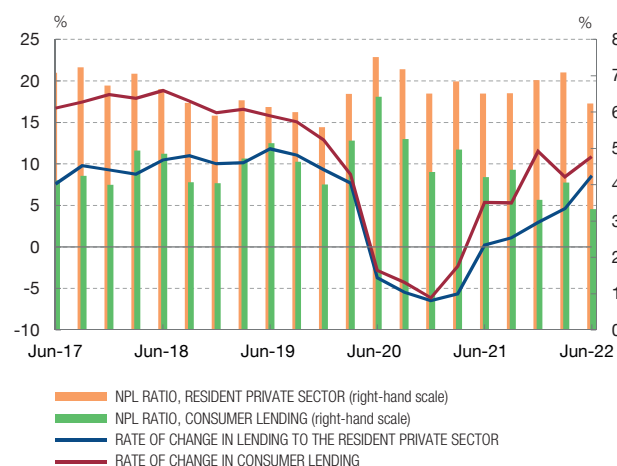
**The stock of loans extended by specialised lending institutions (SLIs) to the resident private sector grew in the six months to June, while their NPL ratios declined and their profits improved.** The outstanding stock of credit extended by SLIs to the resident private sector rose by 8.6% year-on-year in June 2022, representing a

Chart 2.16

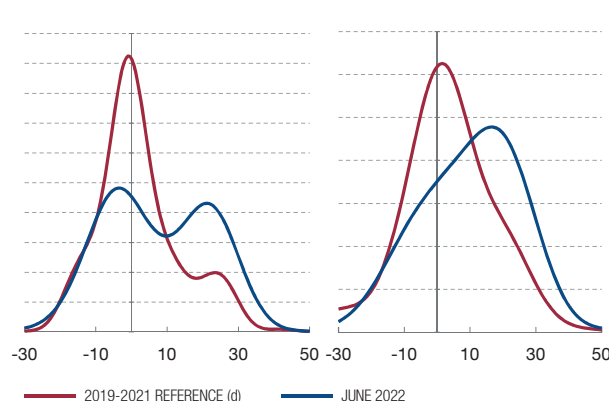
#### **THE LOAN PORTFOLIO OF SPECIALISED LENDING INSTITUTIONS, PARTICULARLY IN THE CONSUMER SEGMENT, GREW IN THE 12 MONTHS TO JUNE 2022, WHILE THEIR NPL RATIOS DECLINED (a)**

The outstanding stock of loans extended by specialised lending institutions (SLIs) rose year-on-year to June 2022, especially in the consumer segment, which has a large weight in SLIs' portfolios (41.3% at June 2022). The NPL ratio declined over the same period. The distribution of SLIs by rates of change in lending to the resident private sector and consumer lending shifted to the right, showing that the increase in lending was widespread among SLIs.

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



2 DISTRIBUTION OF RATE OF CHANGE IN LENDING TO THE RESIDENT PRIVATE SECTOR (L-H PANEL) AND OF CONSUMER LENDING (R-H PANEL) (c)



SOURCE: Banco de España.

- a The analysis was performed with the group of SLIs existing in June 2022 and thus excluded the effects of corporate transactions carried out in recent years.
- b The total NPL ratio is higher than the NPL ratio for the consumer segment because of one large SLI specialising in high-risk mortgage loans.
- c The charts show the density function of the year-on-year rates of change in lending, weighted by total loans in each category. The density function is proxied by means of a kernel estimator, which enables non-parametric estimation and provides a continuous, smoothed graphic representation of that function.
- d The 2019-2021 reference is the distribution of the year-on-year rates of change in June 2019, June 2020 and June 2021, considered jointly.

substantial increase on the figure recorded 12 months earlier (0.2%) (see Chart 2.16.1). The consumer credit portfolio, which has a significant weight in these institutions (41.3% in June 2022), grew by 10.8% year-on-year, 5.5 pp more than in June 2021. In the 12 months to June 2022, NPL ratios fell to 6.2% in the case of total lending and 3.3% in consumer credit. Profits after tax at these institutions taken as a whole rose by 32.1% in the first six months of 2022, compared with the same period a year earlier, although this improvement was associated with idiosyncratic factors affecting some institutions.

**The distribution among SLIs of the rates of change in credit has shifted to the right, compared with the period 2019-2021** (see Chart 2.16.3). The general shift towards higher growth rates was observed both in overall lending and, specifically, in consumer loans.

### *Insurance companies*

**The volume of income from direct insurance premiums increased by 4.4% in 2022 H1, compared with the same period a year earlier.** Non-life insurance premiums grew by 5.4% and life premiums by 3%, with the former accounting for 63% of total income. Non-life premiums posted strong growth in a number of categories: health insurance rose by 7.3%, multi-risk insurance by 5.6% and car insurance by 2.3%. The recent growth in income must be set against the context of the extraordinary decline in premiums in 2020 as a result of the pandemic. Indeed, premium income remains 2.2% below the 2019 pre-pandemic figure, partly owing to the incomplete recovery of the car industry, linked to the scant growth of the road vehicle stock. The current growth in the demand for insurance could slow in the coming months in the face of a possible economic downturn.

**The profitability and solvency of this sector improved somewhat in 2022 H1, compared with the same period a year earlier.** ROE stood at 6.4% in June 2022 and the solvency ratio (SCR) at 241.9%, having increased by 0.2 pp and 1.1 pp year-on-year, respectively.

### *Pension funds*

**Contributions to pension funds and their total assets and returns have all declined since mid-2021.** Gross contributions to pension funds fell by more than 12% in the 12 months to June 2022, largely owing to the lower limit on tax deductions for contributions to individual pension schemes.<sup>27</sup> Total pension scheme assets had

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<sup>27</sup> The maximum tax deductible amount has dropped from €8,000 a year in 2020 to €2,000 in 2021. In 2022 it will amount to €1,500 a year, as stipulated in Article 59(2) of the State Budget for 2022, amending Article 52(1) of Law 35/2006 of 28 November 2006.

also declined, by 5.6%, in June 2022, compared with the same month a year earlier. In addition, pension funds' annual average returns fell significantly from 11% in June 2021 to -6% in June 2022 as a result of financial market volatility, fuelled by the war in Ukraine and the heightened inflationary pressures. Nevertheless, despite the 68 bp decline, long-term returns (25 years) remained in positive territory, at 2.7% in June 2022.

### *Investment funds*

**Since early 2022, investment funds in the euro area have seen a decline in their net capital inflows, linked to financial market tensions** (see Chart 2.17.1). Noteworthy were the net capital outflows from fixed-income funds, which may have been harder hit by the expectations of a greater-than-anticipated tightening of global monetary policy in that period. However, these funds have stabilised since mid-2022.

**Mixed and equity funds domiciled in Spain performed comparably to their euro area counterparts, while capital inflows into fixed-income funds rose.** The recovery in flows in Spain was led by funds investing in long-term bonds, which have a higher expected yield at maturity than other securities, although with greater market risk since they are more sensitive to changes in interest rates. In any event, the average maturity of the fixed-income portfolio of Spanish funds is shorter than that of other European funds (see Chart 2.17.2), reducing their average sensitivity to interest rate rises.

**The higher-risk fixed income securities holdings of investment funds in the euro area as a whole remained practically unchanged, while those of funds domiciled in Spain increased.** For investment funds in the euro area, the percentage of holdings with a credit rating bordering on or below investment grade accounted for around 35% of the fixed-income portfolio (close to 13% of the total securities portfolio<sup>28</sup>) at the end of 2022 Q2, representing an increase of around 2 pp when compared with 2021 Q2 (see Chart 2.17.2). Spanish investment funds have a higher proportion of fixed-income securities with this rating, which account for more than 45% of the fixed-income portfolio (20% of the total securities portfolio). In turn, the weight of high-yield securities (fixed-income with a sub-investment grade credit rating) increased, possibly due to a change in the ratings of securities already in the portfolios, rather than to a change in the policies for purchasing securities. The liquidity held in cash and deposits remained at levels similar to those of last year, as did the average maturity of fixed-income portfolios, with only euro area funds posting a slight decrease. In Spain, these funds have higher cash and deposit holdings than

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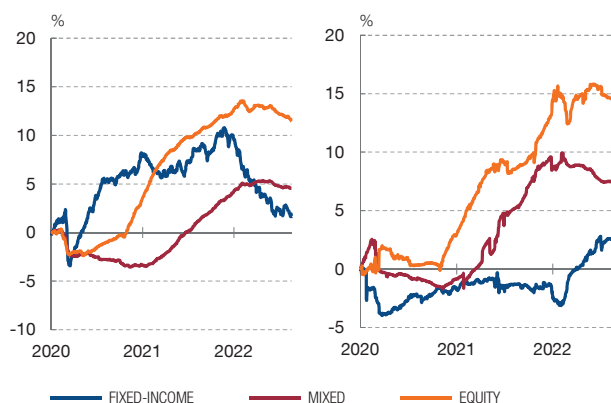
28 According to information from the Securities Holdings Statistics by Sector database (SHSS), the securities portfolio of euro area investment funds had a value of around €12,165 billion at the end of 2022 Q2. The portfolio of funds domiciled in Spain amounted to approximately €277 billion at the same date.

Chart 2.17

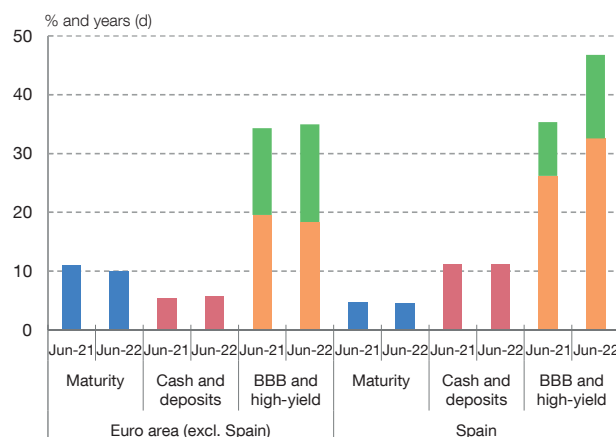
**CAPITAL INFLOWS INTO SPANISH FIXED-INCOME FUNDS INCREASED IN THE FIRST SIX MONTHS OF THE YEAR, AS DID THE WEIGHT OF HOLDINGS WITH LOWER CREDIT QUALITY, IN CONTRAST TO WHAT WAS OBSERVED FOR THIS SEGMENT IN THE EURO AREA AS A WHOLE**

Since early 2022, capital inflows into European mixed and equity funds have lost momentum, while there have been net outflows from fixed-income funds. These performed differently in Spain, recording net capital inflows. The average maturity of investment funds' fixed-income portfolios decreased slightly in Europe and in Spain. In Spain, the weight of holdings with a BBB or lower rating rose by approximately 10 pp compared with June 2021.

1 INVESTMENT FUND FLOWS IN THE EURO AREA (EXCL. SPAIN) (L-H PANEL) AND IN SPAIN (R-H PANEL) (a) (b)



2 LIQUIDITY AND FIXED-INCOME HOLDINGS (MATURITY, CREDIT RATING). EURO AREA (EXCL SPAIN) AND SPAIN (c) (d)



**SOURCES:** Banco de España, ECB, Refinitiv and SHSS.

- a Cumulative change in investment fund net capital inflows and outflows, as a percentage of the total net assets of the funds of each country or region on 15 January 2020, drawing on a representative sample, prepared by Refinitiv, of funds domiciled in euro area countries. The data for Spain in the right-hand panel refer to funds domiciled in Spain included in this sample. The number of funds reporting flows daily in 2022 and included in the sample in that period is 3,319 and 84,333, respectively, for Spain and for the euro area as a whole. The data for days with atypical flow values are omitted. Data up to early September 2022.
- b The left-hand panel of Chart 2.17.1 includes information on the funds domiciled in Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal and Spain. The fixed-income fund category also includes vehicles that invest in the money market.
- c This shows the average maturity of the total fixed-income portfolio, calculated as the weighted average of the maturities of each holding in the portfolio at its market value. The term "high-yield" refers to sub-investment grade credit ratings (from BBB+ to BBB-). The orange and green bars indicate the weight of BBB and high-yield holdings, respectively.
- d Maturity is measured in years, the level of cash and deposits as a percentage of total financial assets, and the percentage of BBB and high-yield holdings as a percentage of the fixed-income portfolio.

those of the euro area as a whole. This mitigates the higher risk profile mentioned earlier, owing to the lower credit ratings (higher credit risk) of the holdings, but it also means that their average returns are lower.

## 2.2.2 Systemic interconnections

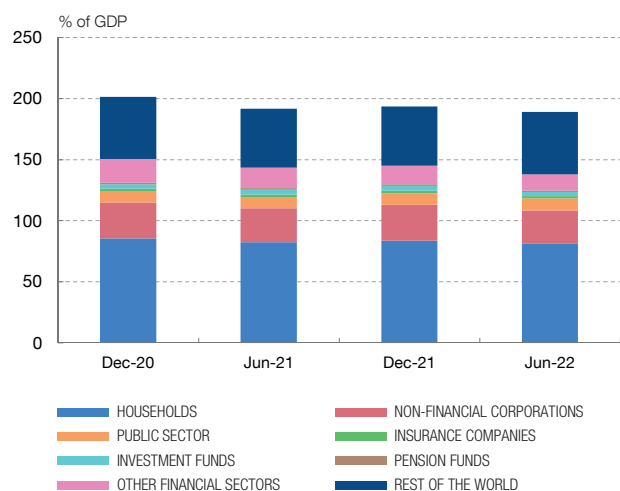
**As a percentage of GDP, the Spanish banking system's liabilities vis-à-vis other resident sectors have declined in recent quarters and its liabilities to the rest of the world have increased.** The value of overall liabilities fell from around 193% of GDP in December 2021 to 189% in June 2022 (see Chart 2.18.1). As a percentage of GDP, liabilities vis-à-vis households declined, from 84% to 81%, as did liabilities to non-bank financial sectors (insurance companies, investment funds, pension funds, etc.), from 22% to 20%, and liabilities vis-à-vis NFCs, from 29% to 27%. The proportion of liabilities vis-à-vis the rest of the world rose from 49% to 51%.

Chart 2.18

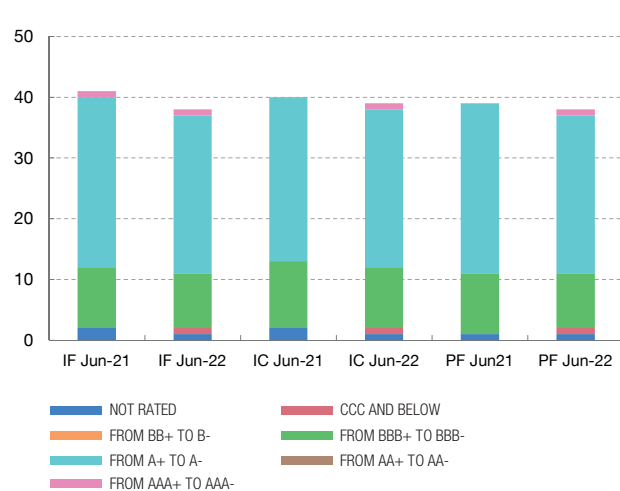
**THE BANKING SECTOR'S LIABILITIES VIS-À-VIS RESIDENT SECTORS DECLINED, WHILE THOSE VIS-À-VIS THE REST OF THE WORLD INCREASED. COMMON HOLDINGS WITH OTHER FINANCIAL SECTORS HELD STEADY**

The banking sector's liabilities vis-à-vis resident sectors declined in the first six months of the year by around 7 pp of GDP. In the same period, the liabilities vis-à-vis the rest of the world increased by 2 pp of GDP. The share in total securities holdings and the distribution of credit ratings of common holdings with other financial sectors remained relatively unchanged.

1 BANKING SECTOR LIABILITIES VIS-A-VIS OTHER SECTORS OF THE ECONOMY (a)



2 SHARE OF COMMON HOLDINGS OF BANKS AND OTHER FINANCIAL SECTORS IN BANKS' SECURITIES PORTFOLIOS (b)



SOURCES: Banco de España, Refinitiv and SHSS.

- a The "other financial sectors" category includes all the Spanish financial sectors not disaggregated in the chart. Individual data.
- b The banking sector's portfolio includes securities also held by other sectors in their portfolios. The bars shows the common holdings between banks and other Spanish financial sectors. For example, the first bar shows that the common holdings between banks and investment funds accounted for around 40% of the banking sector's total securities portfolio in June 2021; of these, approximately 10% have ratings bordering on investment grade (from BBB+ to BBB-). The calculations are based on the market value of the holdings reported by banks (or, where applicable, their fair value). The latest available rating at each date is used, standardised according to the S&P credit rating scale.

**The banking sector's common holdings of securities vis-à-vis other resident financial sectors declined slightly in June 2022, compared with June 2021.** Moreover, the distribution of the credit ratings of these holdings remained relatively unchanged. The weight of these common holdings (securities in the portfolios of both banks and other financial sectors) fell slightly in 2022 Q2 compared with 2021 Q2, with the largest decline, of around 3 pp, in banks and investment funds (see Chart 2.18.2). Currently, the banking sector's common holdings vis-à-vis other financial sectors represent close to 40% of banks' total securities portfolio.<sup>29</sup> The distribution of the credit ratings of these holdings remained relatively unchanged, with a predominance of assets with a rating of A+ to A- (between 26% and 28%). Common holdings bordering on investment grade accounted for around 10% of the securities portfolio. Albeit small, this latter group of exposures is more vulnerable to the economic cycle and could trigger fire sales if their credit rating is downgraded.

<sup>29</sup> The market value of the Spanish banking sector's securities portfolio amounted to some €640 billion at end-June 2022. Approximately 40% of this volume was invested in securities also held in other sectors' portfolios.

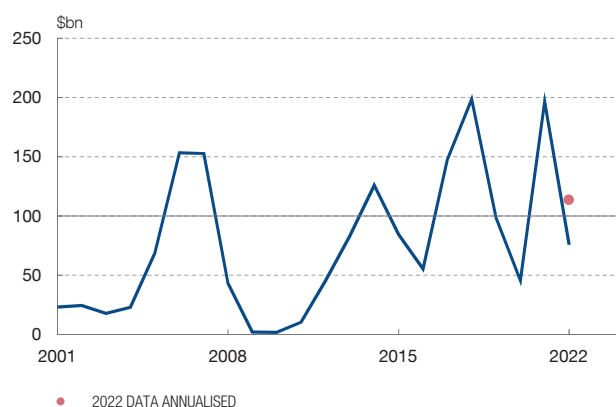
**Interconnections created by derivatives are a significant channel for transmission of risk, not only between financial institutions but also with other economic sectors.**<sup>30</sup> Derivatives could create contagion channels between NFCs and the financial system, as has been seen in recent months, against a backdrop of soaring energy – especially gas – prices. This is because energy derivatives trading through central counterparty clearing houses (CCPs) requires that counterparties hold a certain level of collateral, which varies according to the moves in price and the price volatility of the underlying energy product.<sup>31</sup> As gas prices rise, counterparties holding short positions in these contracts need to post more collateral with clearing houses. Additionally, if price volatility increases, both parties to the contract could be required to post more collateral. Recently, several energy corporations in central and northern Europe experienced liquidity difficulties meeting collateral calls on their short derivatives positions. This led their respective governments to provide them with liquidity lines to advance the collateral, given that the banks with which these corporations operated had reached their internal individual risk tolerance limits and the interest rates required to continue to provide funding were deemed unacceptable by the energy corporations. The recent moderation in energy prices will reduce the

Chart 2.19

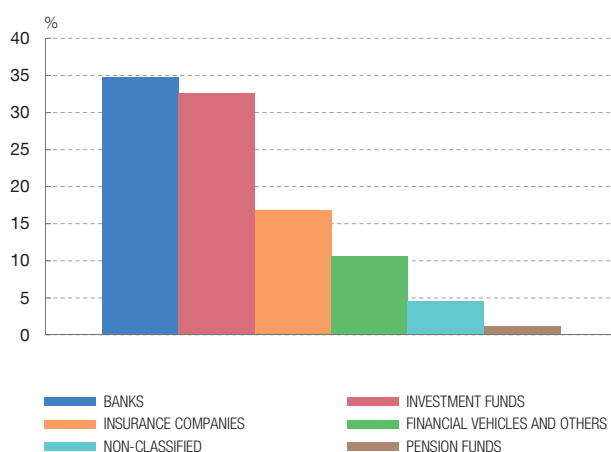
**THE NON-BANKING FINANCIAL SECTOR HAS A HIGH DEGREE OF EXPOSURE TO CLOs**

Recent years have seen strong CLO issuance; the bulk of the identified holdings are on the balance sheets of non-bank financial intermediaries, which could face losses in the event of a deterioration in credit quality in the non-corporate financial sector.

1 CLO ISSUANCE



2 DISTRIBUTION OF CLO HOLDINGS IN THE EURO AREA IN 2022 Q2, BY INSTITUTIONAL SECTOR (a)



**SOURCES:** ESMA (SFTDS project), ECB, Banco de España, Refinitiv and SHSS.

**a** Breakdown of CLO holders. Sample of the CLOs on which SHSS has data on holders, which according to Refinitiv Eikon amount to 15% of all active CLOs. There are no significant differences, in terms of instrument size, currency or country of issuance, between the sample and the CLOs on which there is no information.

30 For more details, see section 2.2.2 of the [Spring 2022 FSR](#).

31 It is difficult to assess OTC contracts not settled through CCPs, owing to the opacity of these contracts.

need for further potential measures, but the uncertain environment requires that these dynamics be regularly monitored.

**Euro area banks’ direct exposure to the recent problems faced by energy corporations is limited, but risks of an impact via indirect channels remain.**

Some banks hold loans extended to energy corporations and securities issued by them on their balance sheets, or act as counterparties for them in derivatives contracts. According to the latest data available in the ECB’s Statistical Data Warehouse, the euro area banking sector’s exposure to energy sector corporations through loans and advances accounted for some 1.3% of total assets (1% for Spain) at end-2021. Fixed-income exposures are also low, both for Spanish banks and European banks overall, but the stress in the energy sector could pass through to other sectors and could ultimately affect the value of a broader set of holdings.

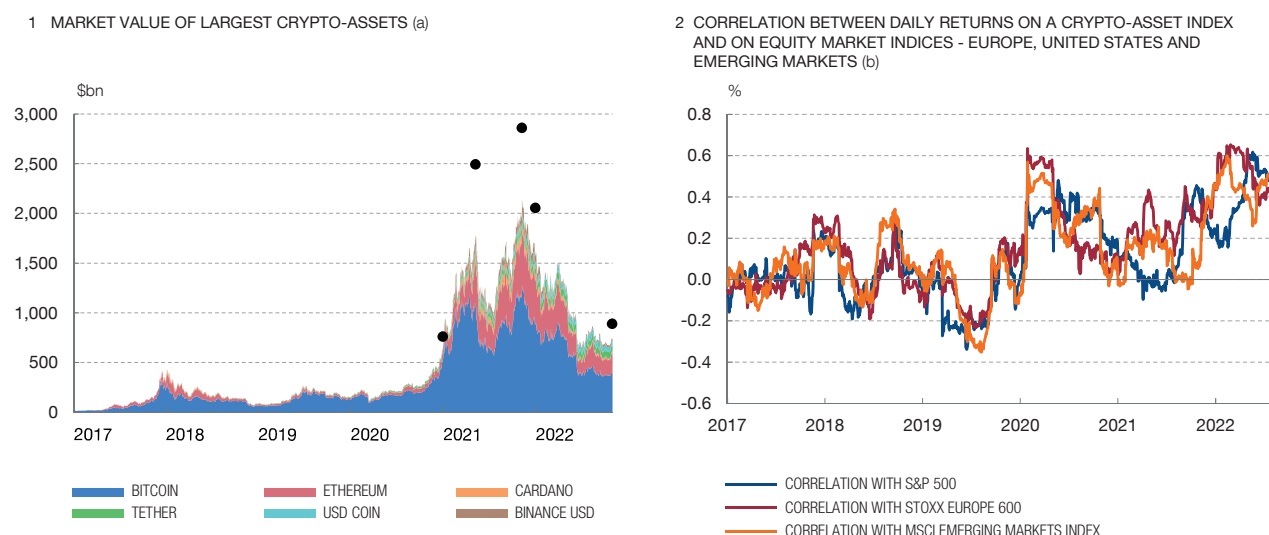
**Collateralised loan obligation (CLO) issuance has been high in recent years; non-bank financial intermediaries are particularly exposed to this segment.**

Issuance of CLOs – market-traded instruments whose collateral are corporate (sometimes high-yield) loans – has been very high since 2017, reaching €760 billion

Chart 2.20

**THE MARKET VALUE OF CRYPTO-ASSETS HAS FALLEN SHARPLY IN 2022, WITH A HIGH CORRELATION BETWEEN THESE INSTRUMENTS AND EQUITIES**

The market prices of unbacked crypto-assets, such as bitcoin, have been highly volatile and have seen sharp corrections. Backed crypto-assets have been steadier, albeit with some exceptions. This poor crypto-asset performance has coincided with price falls in traditional risk assets such as equities. In general, there is a high correlation between crypto-asset and stock market returns.



SOURCES: FSB, Refinitiv, CoinMarketCap and MVIS Investable Indices.

- a Bitcoin, Ethereum and Cardano are unbacked crypto-assets, while all the others depicted in the chart are stablecoins. The dots denote the market value of all crypto-assets, not only those included in the chart.
- b The crypto-asset index used to calculate the correlations is the MVIS CryptoCompare Digital Assets 100 Index, made up of the 100 largest (backed and unbacked) crypto-assets by market value.



in cumulative terms (see Chart 2.19.1). CLO issuance has recovered after falling sharply during the pandemic, overtaking at June 2022 the 2020 H1 level. Strong CLO issuance means that credit risk associated with loans to the corporate sector spreads from the lending banks to other financial intermediaries. Indeed, analysis of holdings of CLOs, identified in the SHSS statistics, shows that a large portion of these holdings are on the balance sheets of non-bank financial intermediaries, while the banking sector's holdings account for just 35% of the total at June 2022 (see Chart 2.19.2). Among non-bank financial intermediaries, the holdings of investment funds, which own more than 30% by volume of the CLOs analysed, stand out.

**At the start of the year the market prices of the main crypto-assets fell sharply.**

In the opening months of 2022, the market prices of the main unbacked crypto-currencies, such as bitcoin, tumbled (see Chart 2.20.1). Stress was also observed in some backed crypto-assets (the so-called stablecoins), but it was not widespread, which suggests that investors discriminated between them, assessing the specific risks of each. These developments coincided with episodes of stress in traditional financial assets, such as equities. In general, there is a high correlation between the market prices of crypto-assets and of all other assets. This calls into question the diversification in terms of risk that an investor can achieve by exposure to these assets (see Chart 2.20.2).

