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FINANCIAL SECTOR RISKS AND RESILIENCE

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Against the current backdrop of monetary policy tightening, to June 2023 the outstanding amount of bank lending to the resident private sector in Spain fell and the pace of new lending slowed. Credit quality in Spain, however, remains considerably resilient and there are no noteworthy signs of impairment. Meanwhile, the cost of bank borrowing continues to grow progressively. Nevertheless, the pass-through of higher interest rates to retail deposits is weak and smaller than in the case of loans. In addition, wholesale bank funding markets have stabilised after the stress of last March. All this has helped banks improve their ordinary profit and solvency.

Looking ahead, the Banco de España's stress tests reflect the banking sector's high overall resilience to an adverse scenario – consistent with that of the European Banking Authority's (EBA) EU-wide stress test – that combines a severe recession with further inflationary pressures and interest rate increases. However, the materialisation of the risks identified in the scenario would have a material impact on profitability and deplete some of the existing capital reserves, albeit unevenly across banks. It is therefore necessary to continue with a prudent capital and provisioning policy that takes advantage of the recent sound financial performance.

The non-bank financial intermediation sector has returned to growth after contracting in 2022 and no significant changes in its structure are detected at national or European level. Of note in Spain are flows towards fixed-income investment funds, which are considerably bigger than those observed in other European countries.

2.1 Deposit institutions

2.1.1 Balance sheet structure, risks and vulnerabilities

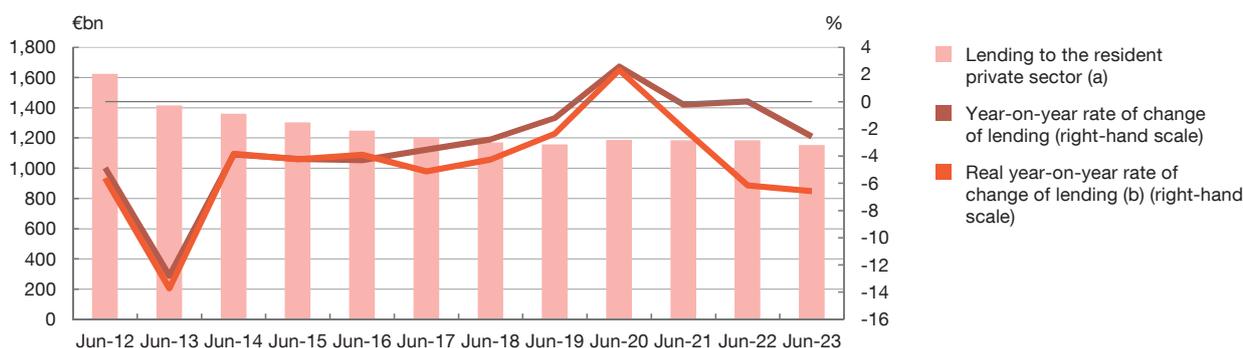
Credit risk

The volume of bank lending to the resident private sector continued to fall in Spain in 2023 H1. The outstanding amount fell by 2.6% year-on-year in June 2023 (see Chart 2.1.a), steepening considerably from the 0.7% year-on-year contraction recorded in December 2022. The decline affected lending to households and non-financial corporations (NFCs) alike, but was sharper in the case of the latter. In real

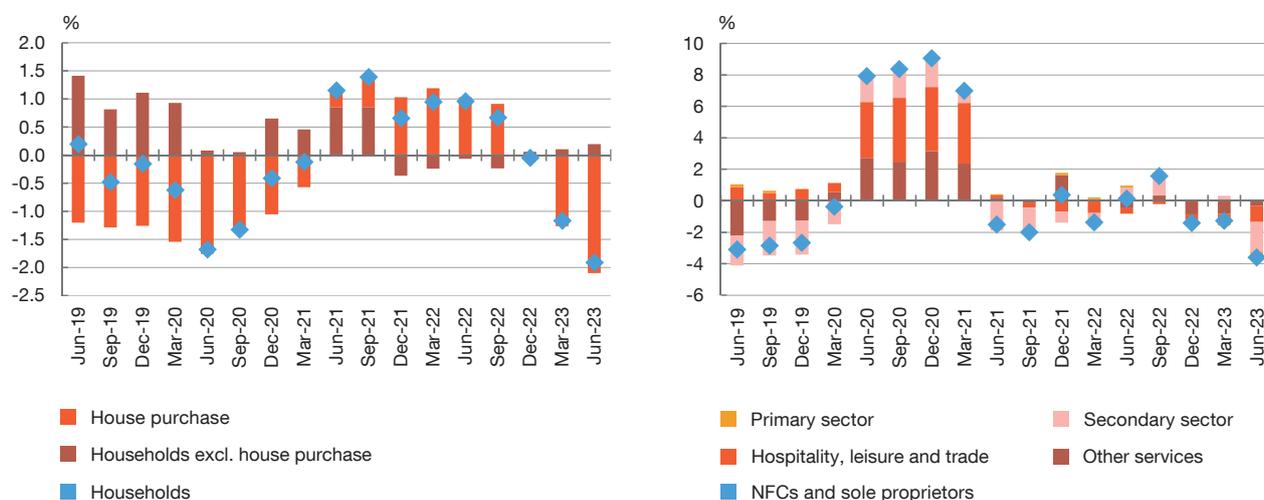
Chart 2.1

Lending to the resident private sector contracted in H1

2.1.a Volume of lending and rate of change. Business in Spain. ID



2.1.b Contributions to the year-on-year rate of change of lending to households (l-h panel) and NFCs and sole proprietors (r-h panel). Business in Spain. ID



SOURCE: Banco de España.

- a The resident private sector includes households, NFCs and sole proprietors, and financial corporations.
- b To obtain the real rate of change of lending time series, the composition of lending was taken into account, deflating the portion of lending to households (not for business purposes) by the consumer price index and other lending (to NFCs, financial corporations and sole proprietors) by the GDP deflator.



terms,¹ bank lending to the resident private sector fell year-on-year by 6.6%, up slightly on the December 2022 figure (6.2%).

The reduction in the outstanding amount of lending to households in June 2023 was driven by the contraction in loans for house purchase. The volume of lending to households decreased by 1.9% relative to June 2022, while it remained steady at end-2022 (see Chart 2.1.b, left-hand panel). This decline is essentially due

¹ The figures for real lending in this paragraph are obtained by deflating the portion of lending to households (not for business purposes) by the consumer price index and other lending (to NFCs, financial corporations and sole proprietors) by the GDP deflator. All other references to lending in this chapter relate to nominal lending.

to the 2.6% decrease in its main component (loans for house purchase), which was not offset by the 1% growth in other lending to households. Changes in new lending and the repayment of existing loans explain these declines, as analysed in more detail in Chapter 1.

The outstanding amount of business lending recorded its steepest drop since June 2019 in June 2023, owing essentially to the fall in lending to industry and hospitality, leisure and trade. The decline in the outstanding amount of lending to NFCs and sole proprietors steepened further, recording a year-on-year decrease of 3.6% at end-2023 H1 (see Chart 2.1.b, right-hand panel). The considerable year-on-year decreases in lending to industry (-6%) and to hospitality, leisure and trade (-4.1%) contributed notably to this decline. The decrease in this portfolio's outstanding amount is mainly explained by repayments of outstanding debt.

New lending grew in 2022 despite higher interest rates, but a widespread reduction in bank credit growth was observed in 2023 H1. New lending to households, NFCs and sole proprietors grew 1.4% in the 12 months to June, in contrast with the growth of 13% in the 12 months to the end of 2022 (see Chart 2.2.a). The contraction in new lending to households, which shrank 8.7%, is noteworthy, while new lending to NFCs and sole proprietors grew by 4.9%.² The principal drawn down against available credit lines (cumulative 12-month figure) grew by 10.7% year-on-year in June 2023, which could reflect borrowers accommodating to lower growth in new lending and expectations of a possible further tightening of financing conditions in coming quarters. The distributions among banks of year-on-year growth in new lending to both households and NFCs have shifted towards lower values in recent half-year periods (see Chart 2.2.b).

The pass-through of the increase in the main reference interest rate (EURIBOR) to average bank loan portfolio rates continued in 2023 H1. The 12-month EURIBOR stood above 4% in June 2023, after increasing by a cumulative 451 basis points (bp) since the start of the current policy interest rate hike episode in December 2021 and 100 bp since December 2022. Against this backdrop, the pass-through³ of the increase in the key policy rates to the average rates⁴ for banks' household and NFC loan portfolios continued in 2023 H1, nearing 50% in the case of loans for house purchase and lending to firms and 30% in lending to households for other purposes. The degree of pass-through is so far still lower than in past interest rate hike cycles (see Chart 2.3). Compared with Europe, the degree of pass-

2 In the 12 months leading up to June 2023, new lending guaranteed by the Official Credit Institute (ICO) aimed at mitigating the effects of the war in Ukraine accounted for 1% of total new lending to NFCs and sole proprietors.

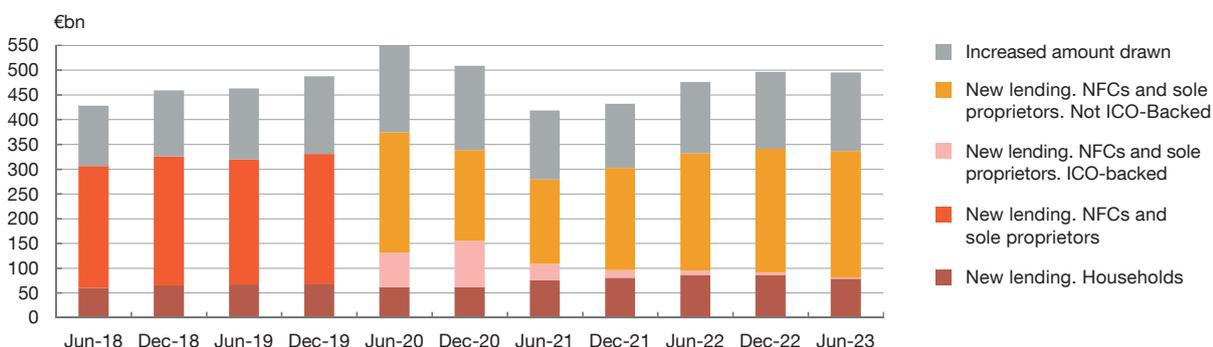
3 Pass-through is defined as the ratio between the cumulative change (in pp) in the interest rates applied to loans and the change in the 12-month EURIBOR in the reference period.

4 Average rates for the entire outstanding amount of the corresponding portfolios, including variable and fixed-rate loans. The latter contribute to a lower pass-through of changes in the EURIBOR.

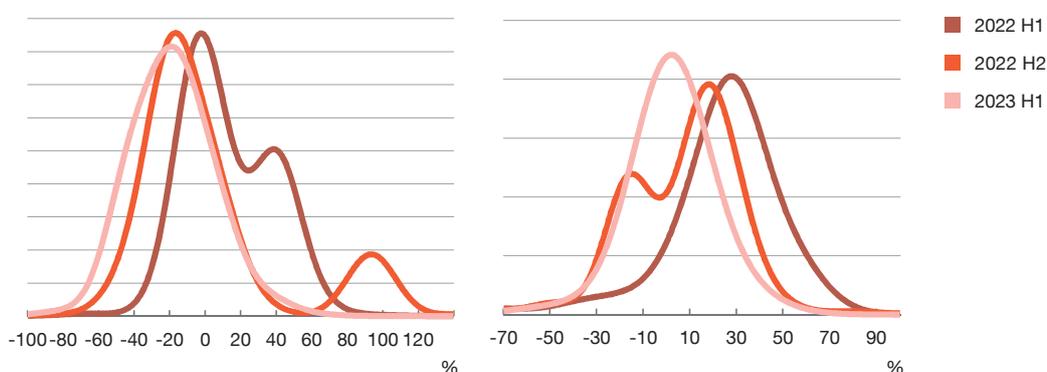
Chart 2.2

Most banks curbed lending in H1

2.2.a Cumulative 12-month volume of new lending. Households and NFCs and sole proprietors (a)
Business in Spain. ID



2.2.b Distribution among banks of the year-on-year rate of change of half-yearly new lending flows to households (l-h panel) and NFCs and sole proprietors (r-h panel) (b). Business in Spain. ID



SOURCE: Banco de España.

a Excluding other financial corporations.

b The chart depicts the density function of the year-on-year rate of change of the half-yearly new lending flows to households (l-h panel) and NFCs and sole proprietors (r-h panel) for Spanish deposit institutions, weighted by the flow of half-yearly new lending for that purpose. The density function is estimated using a kernel estimator, which enables non-parametric estimation and provides a continuous, smoothed graphic representation of the function.



through to average bank lending rates in Spain is relatively higher than in other jurisdictions,⁵ partly because of the higher share of variable-rate loans.⁶

The NPL ratio stood at 3.4% at end-2023 H1, remaining on its downward trend.

The NPL ratio was down 1.9 percentage points (pp) and 0.4 pp on June 2019 (before the pandemic) and June 2022, respectively (see Chart 2.4.a). These declines were driven by improvements in the NPL ratio for households (down 1.7 pp and 0.3 pp on June 2019 and 2022, respectively) and for the non-financial corporate sector (down

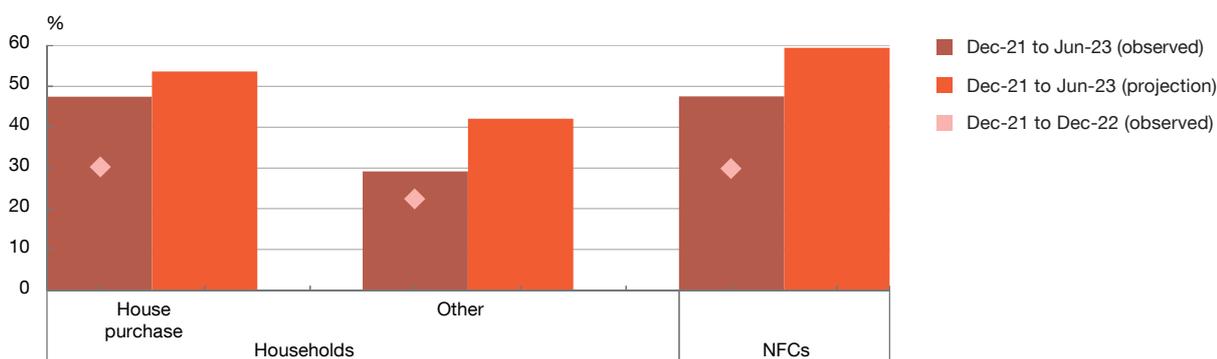
5 For example, on [ECB bank interest rate statistics](#), the degree of pass-through for the euro area as a whole in June 2023 was 43% for loans to firms and 13.3% for loans for house purchase.

6 See, for example, Banco de España. (2023). *Financial Stability Report, Spring 2023*, Chart 10 of Box 1.

Chart 2.3

Pass-through of monetary policy tightening to bank loans continued in 2023 H1

2.3.a Pass-through of the increase in the EURIBOR to average interest rates on the outstanding amount of loans (a)



SOURCE: Banco de España.

a Pass-through is defined as the ratio between the cumulative change (in pp) in the interest rates applied to loans and the change in the 12-month EURIBOR in the reference period. Changes in commercial interest rates are projected using a multivariate structural VAR model based on interest rates data reported to the ECB.



2.6 pp and 0.6 pp on June 2019 and 2022). However, the volume of non-performing loans to households showed some signs of deterioration, growing by 2.9% in 2023 Q2 (see Chart 2.4.b, left-hand panel). Meanwhile, the NPL ratio of ICO-backed loans increased by 4.2 pp over the last 12 months, to stand at 8.3% in June 2023 (see Chart 2.4.a). While the volume of ICO-backed non-performing loans at that date increased year-on-year (58.6%, versus 81.7% in December 2022), the increase in the NPL ratio is also explained by a decrease in the volume of loans in this category (-21.8%, versus -11.2% at end-2022), the result of the gradual repayment of this portfolio.⁷

Similarly, the share of Stage 2 loans fell moderately to 6.9% of lending to the resident private sector at June 2023. This figure represents respective decreases of 0.24 pp and 0.19 pp since June and December 2022; however, these troubled loans still account for a higher share of lending to the resident private sector than before the pandemic (5.9% in June 2019).

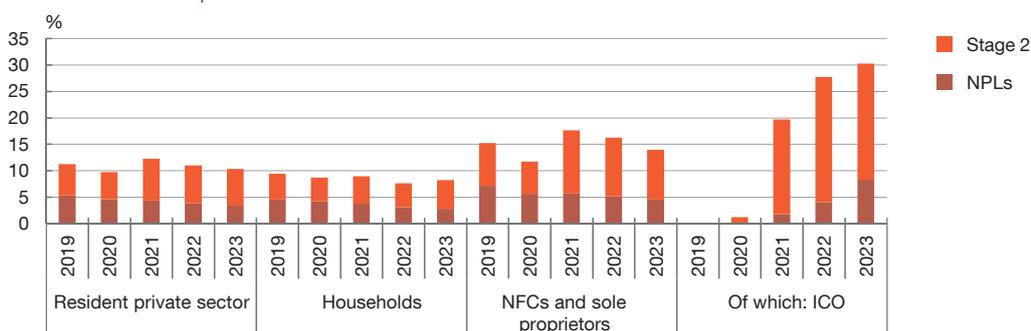
In the 12 months to June 2023, Stage 2 loans performed unevenly across institutional sectors, with the proportion of Stage 2 loans in lending to households growing. The share of Stage 2 loans in this portfolio increased by 0.9 pp in that period, standing at 5.4% in June 2023. However, they decreased in volume by 4.3% (2.2% for the consumer credit segment) in 2023 Q2 (see Chart 2.4.b, right-hand panel). Meanwhile, for the non-financial corporate sector, the proportion

⁷ As a reference, had the volume of credit at June 2022 remained constant, the NPL ratio would have been 6.5% rather than 8.3%.

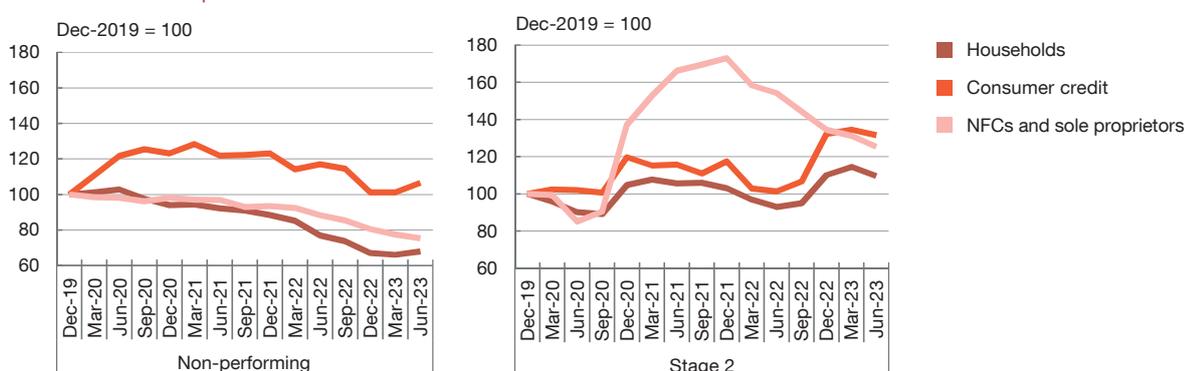
Chart 2.4

There are no significant signs of a deterioration in credit quality, despite lending to households performing worse

2.4.a Share of lending classified as non-performing and in Stage 2. June of each year. Business in Spain. ID



2.4.b Volume of NPLs (l-h panel) and Stage 2 loans (r-h panel) Business in Spain. ID



SOURCE: Banco de España.



of Stage 2 loans fell by 1.7 pp (to 9.4%) in the 12 months to June 2023. Within this sector, the share of Stage 2 ICO-backed loans fell by 1.7 pp year-on-year (to 22.0% at June 2023). As with the NPL ratio of ICO-backed loans, the share of these troubled loans remains high partly because of the public guarantee scheme's closure and the repayment of these loans.⁸

The volume of loan refinancing, restructuring and roll-over in lending to households has slowed down, whereas renegotiation has picked up. Of the outstanding amount of loans to households in June 2022, 1.2% was renegotiated, refinanced, restructured or rolled over⁹ between July 2022 and June 2023 (see Chart 2.5.a), a similar proportion to that observed pre-pandemic (1.1% between

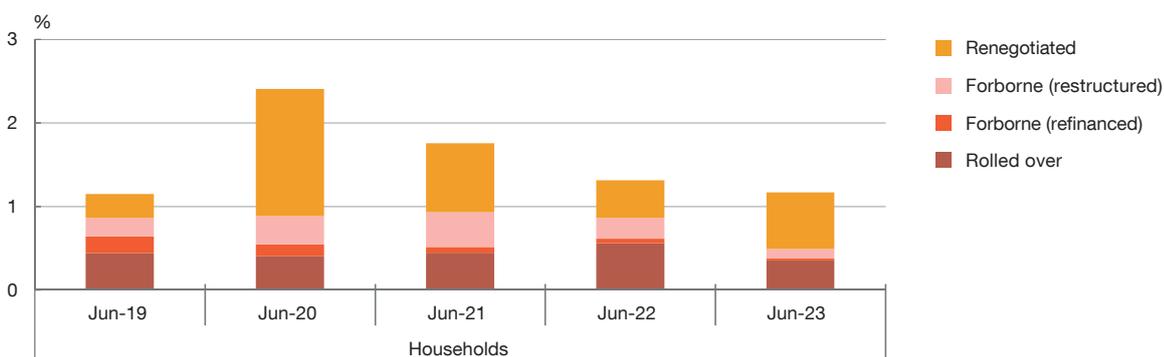
⁸ As a reference, had the volume of credit at June 2022 remained constant, the ratio of Stage 2 loans would have been 17.2% rather than 22%.

⁹ Refinancing is granted to facilitate the compliance of borrowers in financial difficulties with one or more (refinanced) transactions; restructuring is where the contractual terms are amended to facilitate payment of the debt due to the borrower's difficulty to pay; renegotiation is where the financial conditions are amended without the borrower being in financial difficulties; and a roll-over is a loan arranged to replace another previously extended by the bank without the borrower being in financial difficulties.

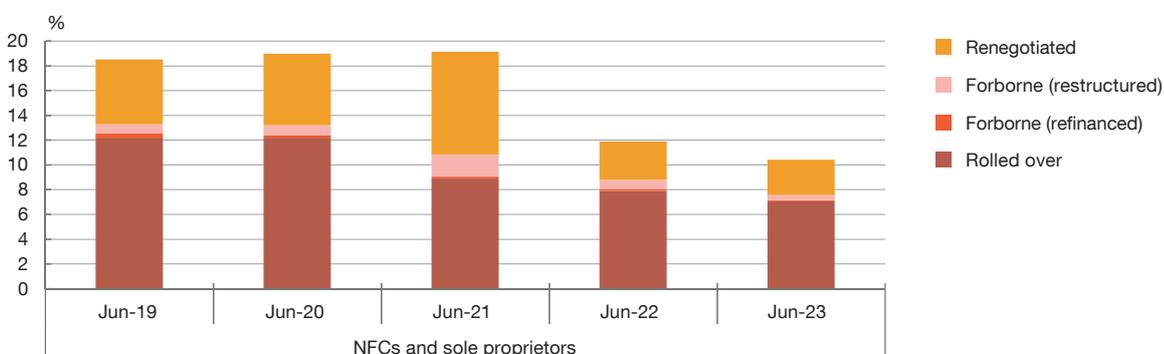
Chart 2.5

No increase in modifications of loan terms and conditions has been observed to June

2.5.a Cumulative 12-month flow of renegotiations, refinancing, restructuring and roll-overs (a). Households. Business in Spain. ID.



2.5.b Cumulative 12-month flow of renegotiations, refinancing, restructuring and roll-overs (a). NFCs and sole proprietors. Business in Spain. ID.



SOURCE: Banco de España.

a The sum of the monthly flows from July to June as a percentage of the portfolio in June of the previous year is used to construct the cumulative 12-month flow.

July 2018 and June 2019). However, it is noteworthy that renegotiation amounted to 0.7% in the last 12 months, exceeding the pre-pandemic figure (0.3%). The increase in renegotiations is consistent with changes in the type of mortgage (from floating to fixed-rate) – prompted by the recent interest rate hike environment – and with the expected effect of the measures under Royal Decree-Law 19/2022, which lower the costs associated with amending such conditions.

The flow of transactions amending the terms and conditions of lending to the non-financial corporate sector has also slowed. The decline in the 12 months to June 2023 was moderate; however, it is more pronounced when compared with prior years (e.g. 10.4% in June 2023, versus 11.9% in June 2022 and 18.5% in June 2019) (see Chart 2.5.b). The lower percentage of rolled-over and renegotiated lending in the last 12 months than reported pre-pandemic (7.1% versus 12.2% and 2.9% versus 5.2%, respectively) is also noteworthy. This significant deceleration could be at least

partly explained by the stock of ICO-backed loans, which would afford NFCs some protection against the higher interest rate scenario, rendering these measures less necessary. The decline in roll-overs would also be influenced by the incentives to deleverage in a higher interest rate environment.

The outstanding amount of forborne exposures continued to fall. Compared with June 2022, their relative share of total lending to the resident private sector fell by 0.8 pp to 3.9% at June 2023, while their volume decreased by 18.6%. Compared with December 2019 (before the pandemic), the volume of forborne exposures shrank by 21.3%, thus continuing the downward trend observed since the end of the global financial crisis.

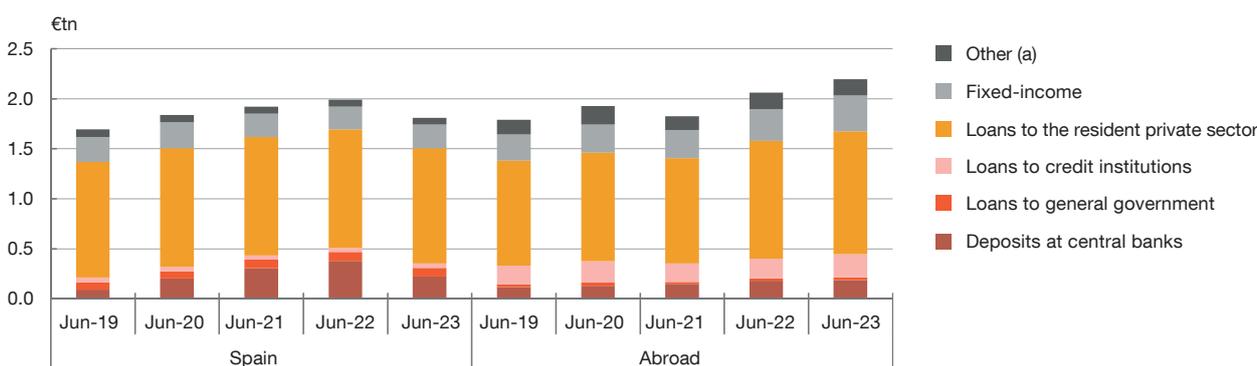
Foreclosed assets also fell to the end of 2023 H1. In June 2023 they fell 18.4% year-on-year, to stand at a level equivalent to 1.5% of total lending to the resident private sector at that date. Since December 2019, this type of asset has decreased by more than 43.4%, continuing the pre-pandemic downward trend.

The growth of financial assets abroad partially offset the smaller balance sheet in business in Spain. At June 2023, the total consolidated assets of Spanish deposit-taking institutions stood at €4,148 billion, having fallen 1.2% compared with June 2022 (see Annex 1). Financial assets¹⁰ in Spain fell 8.6% year-on-year, while those stemming from business abroad (expressed in euro) increased by 6.4%. As a result, they accounted for 55% of the total, up 3.8 pp on June 2022. Much of the

Chart 2.6

Growth in financial assets abroad partially offset the decrease in financial assets in Spain

2.6.a Breakdown of financial assets in Spain and abroad, by asset type



SOURCE: Banco de España.

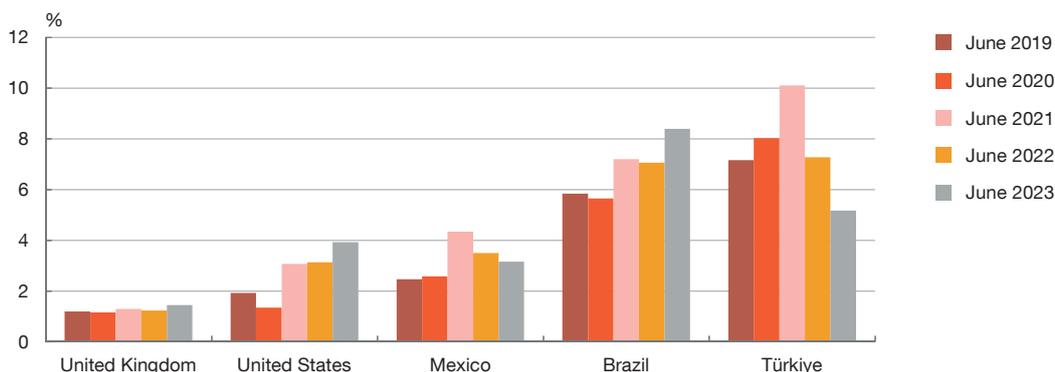
a "Other" comprises cash balances, derivatives and equity instruments.

10 Overall, financial assets (loans, derivatives, debt and equity securities and cash balances) represented 95.3% of the balance sheet of deposit-taking institutions at June 2023.

Chart 2.7

Heterogeneous NPL ratio developments in business abroad

2.7.a NPL ratio for the Spanish banking sector in foreign countries of significant importance (a)



SOURCE: Banco de España.

a Data corresponding to the loan portfolios of Spanish deposit institutions in foreign countries of significant importance.

decline in financial assets in Spain (92%) owed to the reduction in balances held with central banks (-41.1% year-on-year) and, to a lesser extent, to the decrease in loans to the resident private sector and general government (-2.6% and -2.9% year-on-year, respectively). Conversely, debt securities have increased moderately. Meanwhile, the increase in financial assets abroad was driven by lending to the resident private sector, debt securities and interbank loans, against the backdrop of an appreciating euro that partly mitigated this growth (see Chart 2.6). Box 2.1 analyses in more detail the adjustments at consolidated level in debt security holdings in the recent period.

NPL ratios performed unevenly in the countries where Spanish banks have significant business. In year-on-year terms, NPL ratios increased significantly to June 2023 in Brazil (1.3 pp, to 8.4%), while this increase was smaller in the United States (0.8 pp, to 3.9%) and the United Kingdom (0.2 pp, to 1.3%). By contrast, NPL ratios fell in Türkiye (2.1 pp, to 5.1%) and Mexico (0.4 pp, to 3.2%) (see Chart 2.7).

Liquidity and financing conditions

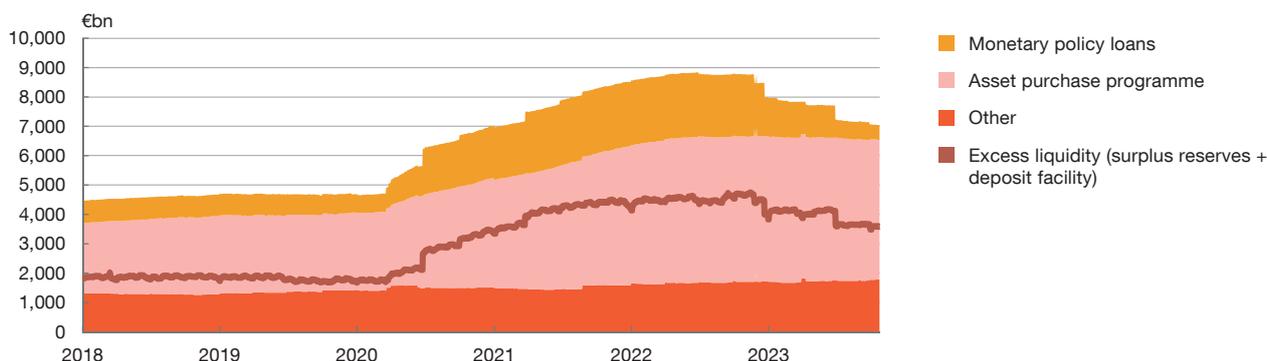
The Eurosystem's balance sheet has continued to decrease as a result of monetary policy normalisation. Since the cut-off date for the last Financial Stability Report, excess liquidity¹¹ fell by €412 billion to €3,590 billion (see Chart 2.8.a), continuing the trend that began at end-2022. The decline owes mainly to the decrease in the volume of monetary policy lending received by banks. Thus,

¹¹ For the purposes of this report, excess liquidity means the balance that commercial banks hold at the central bank (mostly in the deposit facility).

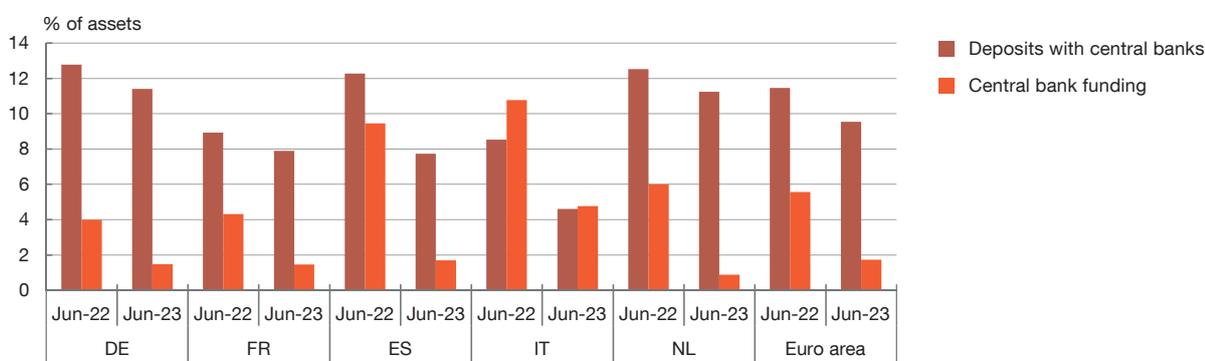
Chart 2.8

Monetary policy normalisation has reduced the direct exposure to the Eurosystem on European banks' balance sheets

2.8.a Eurosystem balance sheet and European banks' excess liquidity



2.8.b Comparison of the position of European banks with central banks. Monetary financial institutions, business in the euro area (a)



SOURCE: ECB.

a The data reflect the balances with the ECB and national central banks of the banks resident in each country, including foreign subsidiaries and branches. A portion of Germany's excess liquidity reflects the operations of foreign institutions, which have deposited with the ECB funds obtained from the sale of assets to ECB purchase programmes.

at end-June banks repaid €506 billion¹² of one of the largest TLTRO III operations previously granted by the Eurosystem¹³ and at end-September they repaid a further €101 billion. By contrast, banks have increased the loans received via the three-month longer-term refinancing operations and the one-week main refinancing operations by €5 billion and €6 billion, respectively. Meanwhile, the gradual reduction in the balance of the asset purchase programme (APP) has started (€144 billion, to €4,751 billion), thus achieving the goal of reducing it at a measured and predictable pace.¹⁴

¹² €477 billion corresponds to the maturity of TLTRO III.4 and €29 billion to early repayments of other outstanding TLTRO III operations.

¹³ In June 2020 the European Central Bank injected €1.3 trillion of liquidity (versus the €371 billion repaid in TLTRO II).

¹⁴ The ECB Governing Council decided to discontinue reinvestments of redemptions under the APP as of July 2023. By contrast, reinvestments under the pandemic emergency purchase programme are expected to continue until at least late 2024.

Recourse to Eurosystem refinancing operations by European banks decreased significantly, and was partially offset by a reduction in their excess liquidity.

The above-mentioned maturity of monetary policy loans reduced the central bank funding¹⁵ of euro area banks as a whole, which fell from 5.5% of their assets in June 2022 to 1.7% a year later. In the case of Spanish banks, which resorted to Eurosystem refinancing operations more (9.4% of assets in June 2022), the decrease was larger, bringing this figure to the European average in June 2023. This drop in Eurosystem funding was largely offset by reductions in the excess liquidity held by banks in the form of deposits at central banks. As a percentage of euro area banks' assets, these deposits decreased by 2 pp, to 9.5% in June 2023. In Spain, the drop was more pronounced, with central bank deposits decreasing from 12.3% of assets in June 2022 to 7.7% a year later (see Chart 2.8.b).

Money market rates have responded to the increases in policy interest rates. The most important money market interest rates, such as the €STR (for unsecured transactions) and the EURIBOR (for the interbank and mortgage market), as well as repo rates (secured market interest rates) have followed a path consistent with the European Central Bank's (ECB) four 25 bp hikes to policy interest rates since May (see Chart 2.9.a).

It should be noted that the substantial TLTRO repayments do not seem to have prompted significant shifts in money market rates or to have hindered the smooth functioning of the repo market. Indeed, after the repo market collateral scarcity in early 2023, it has functioned without significant frictions in the rest of the year to date, aided by the increase in government debt issuance and the collateral released as a result of the repayment of the loans received under TLTRO III.

Spanish banks' secondary market funding costs have also remained relatively stable in 2023 to date. In 2023 Q1, financial market uncertainty induced by the collapses of Silicon Valley Bank (SVB) and Credit Suisse drove up the rate of return¹⁶ required for instruments issued to comply with regulatory requirements, especially for Additional Tier 1 (AT1) capital. However, coordinated central bank and supervisory authority action enabled a swift exit from the crisis, lowering funding costs, which generally returned to their previous levels, except for AT1 (see Chart 2.9.b).

Spanish banking sector debt issuance continued to grow in 2023 H1, driven by improved stock prices and high investor demand. Spanish banks issued 75% more debt in 2023 H1 than in the same period of 2022, thus capitalising on foreseeably more favourable financing conditions than in coming quarters. First, the volume of

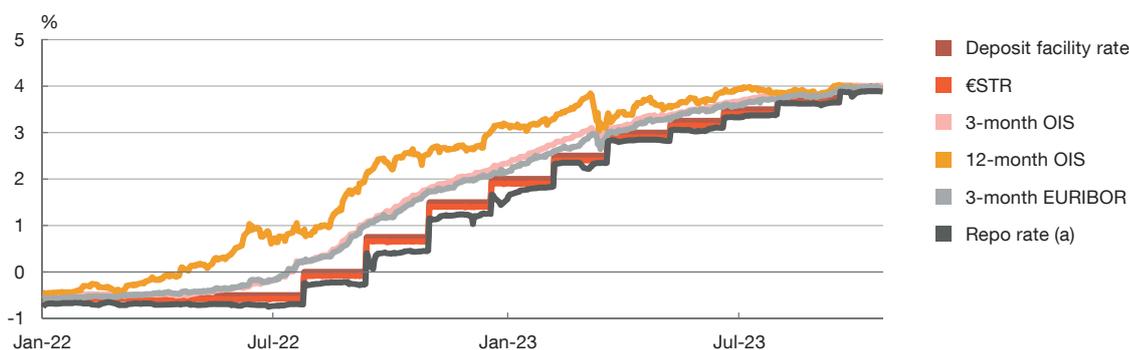
15 Central bank funding includes the set of funds provided by central banks to banks, recognised on the liabilities side of their balance sheets under "deposits from central banks", in accordance with the terminology of the confidential returns relating to euro area statistical requirements.

16 The interest rate required for banks to obtain funding through each type of instrument can be approximated by banks' secondary market funding costs (i.e. the rate of return required by investors). It is obtained as the yield traded on the secondary market for each debt instrument issued by listed Spanish banks.

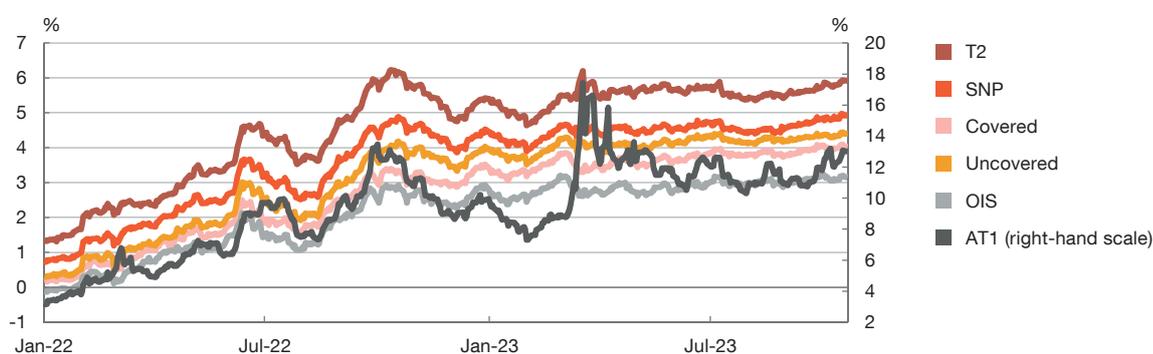
Chart 2.9

Money market rates and the cost of bank debt increased due to the key policy interest rate hikes

2.9.a Risk-free rates



2.9.b Cost of wholesale bank debt. Secondary market. Spanish banks (b)



SOURCES: Refinitiv, ECB and Banco de España.

- a The repo rate is calculated as the average weighted by the volume of each operation issued in Spain, France, Germany and Portugal (only overnight operations whose effective value exceeds €1 million and collateralised by public debt).
- b The rate of return is calculated as the volume-weighted average of the yield traded on the secondary market for the different types of bonds of listed Spanish banks. The OIS curve is calculated for the same average maturity as the uncovered debt issued in the period.

senior debt issuance (in its secured and unsecured segments) remained high, partially replacing the repaid TLTRO III financing (see Chart 2.10). Second, unlike in 2022, banks issued subordinated debt (Tier 2 and AT1) in early 2023, taking advantage of the higher demand for risky assets. These issues halted abruptly in March on account of the greater uncertainty linked to the crisis surrounding Credit Suisse,¹⁷ SVB and other US banks. However, Tier 2 issuance resumed from May, boosted by high demand for riskier instruments against a backdrop of lower volatility,¹⁸ which also helped the subsequent reopening of the AT1 market.

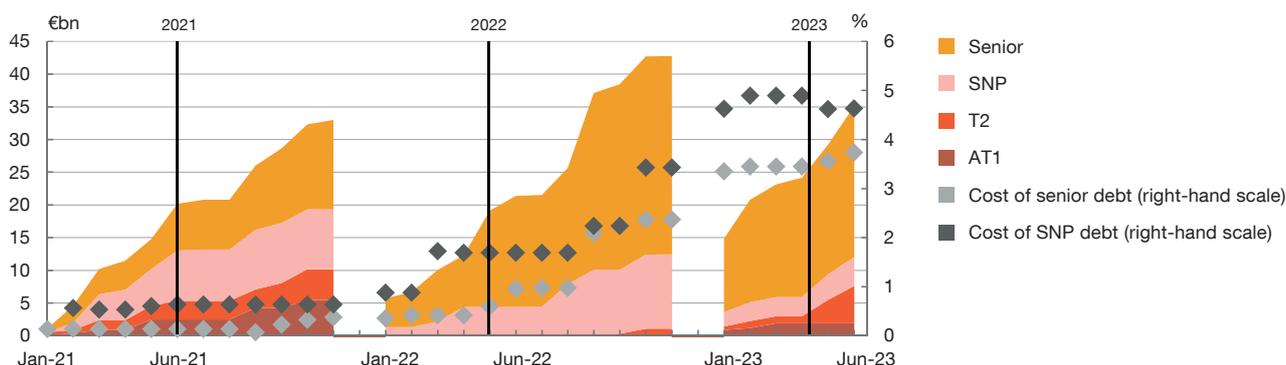
17 On that date, the Swiss authorities decided to protect shareholders to the detriment of AT1 bondholders, thus modifying the creditor hierarchy.

18 On 19 March, a joint ECB, Single Resolution Board (SRB) and European Banking Authority (EBA) statement clarified that in the EU “common equity instruments are the first ones to absorb losses, and only after their full use would Additional Tier One be required to be written down. This approach has been consistently applied in past cases and will continue to guide the actions of the SRB and ECB banking supervision in crisis interventions. Additional Tier 1 is and will remain an important component of the capital structure of European banks.”

Chart 2.10

Banking sector debt issuance has continued growing, underpinned by high investor demand

2.10.a Volume (12-month cumulative) and cost of issuance on primary market (a)



SOURCES: Dealogic and Banco de España.

a The chart depicts the cumulative monthly volume of issuance over the course of each year. Issuance costs for euro-denominated bonds on the primary market are calculated as the volume-weighted average in each period of the year. The primary market cost does not include T2 and AT1 issues, due to their low volume in 2022.

Larger banks increased their issuance of senior non-preferred (SNP) instruments. This will help them comply fully with the minimum requirement for own funds and eligible liabilities after the transition period ends on 1 January 2024.

Spanish banks' issuance costs have risen further in 2023 to date, albeit less so than in 2022. Banks' sound earnings performance in the first two quarters of 2023 and low volatility and risk aversion on the markets, once the March banking crisis was over, were conducive to issuance costs holding steady (see Chart 2.10).

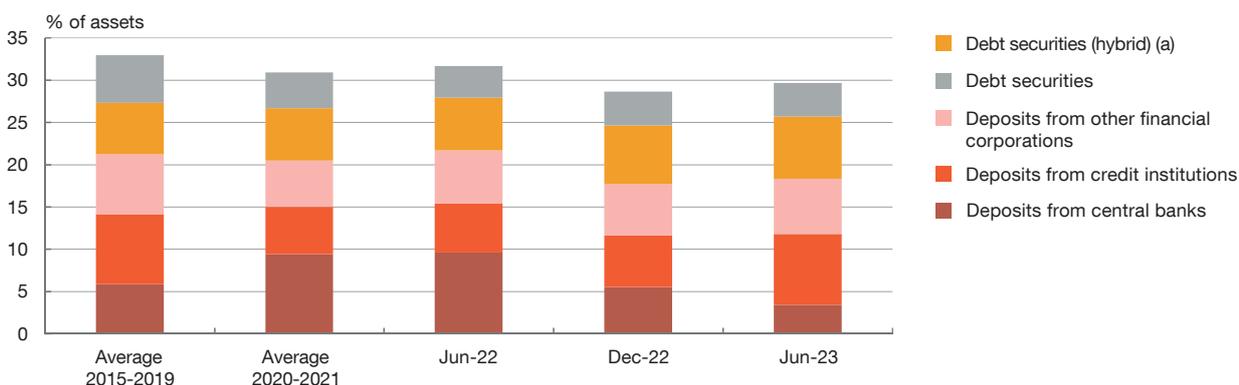
The reduction in Spanish banks' central bank funding was also offset by greater recourse to interbank funding. At consolidated level, the monetary normalisation process reduced central bank funding as a share of total assets by 6.2 pp between June 2022 and June 2023. In the same period, the share of deposits from credit institutions grew by 2.6 pp, while debt securities did so by 1.4 pp. These developments failed to offset the fall in monetary policy loans. Therefore, wholesale funding as a percentage of assets fell from 31.7% in June 2022 to 29.7% in June 2023, below the average values for the period 2015-2019 (see Chart 2.11).

In this setting, banks' cost of liabilities rose considerably in 2023 H1, to 2.3% of total liabilities, 1.5 pp more than in the same period of 2022. Policy interest rate hikes have prompted a gradual increase in the cost of the different sources of bank funding since December 2021. In June 2023 and in annualised terms, it represented 2.3% of banks' consolidated liabilities, versus 0.7% in 2022 H1. In June 2023, despite their average cost remaining at low levels, the remuneration of retail deposits

Chart 2.11

Lower Eurosystem funding has prompted greater use of both debt issuance and the interbank market

2.11.a Deposits from the financial sector and debt securities issued. Consolidated data



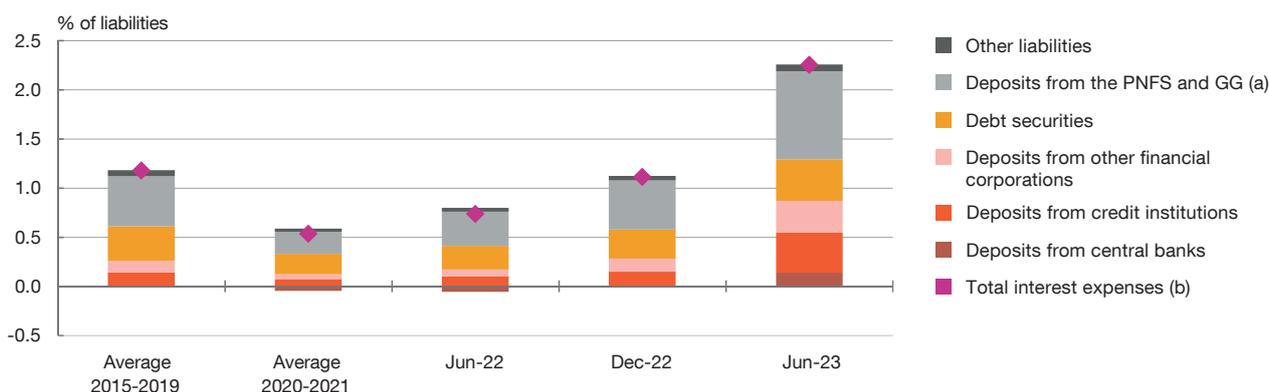
SOURCE: Banco de España.

a Convertible and non-convertible debt securities issued, other than certificates of deposit, covered bonds and hybrid instruments with embedded derivatives.

Chart 2.12

The average cost of liabilities rose significantly in 2023 H1

2.12.a Interest expenses on funding. Annualised data at consolidated level



SOURCE: Banco de España.

a PNFS = private non-financial sector, GG = general government.

b Excludes expenses associated with interest rate hedge derivatives.

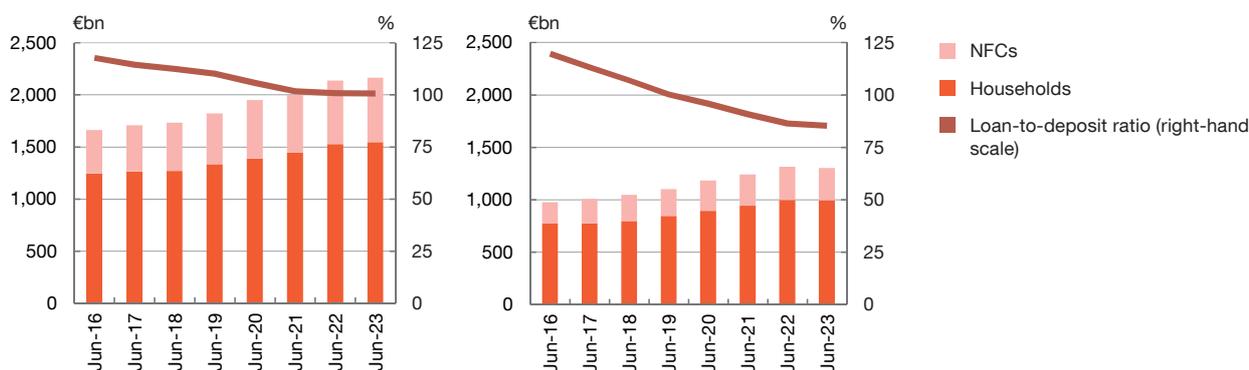
accounted for 40% of banks' total funding costs due to their preponderance in bank funding. The cost of interbank deposits and deposits from other financial corporations also rose considerably, as did the cost of central bank funding, which grew despite the considerable decline in volume terms (see Chart 2.12).

Deposits from households and NFCs grew at consolidated level, but fell in business in Spain. Spanish banks' business abroad underpinned the growth in deposits from these agents, although they grew at a significantly lower rate than in prior years (1.3% year-on-year in June 2023, versus 6.8% a year earlier). Thus, the loan-to-deposit ratio held at a very similar level to that of June 2022 (100.7%). In business in Spain,

Chart 2.13

Deposits from households and NFCs fell in Spain

2.13.a Volume of deposits from households and NFCs and loan-to-deposit ratio (a)
Consolidated data at global level (l-h panel) and individual data for business in Spain (r-h panel)



SOURCE: Banco de España.

a The loan-to-deposit ratio considers loans to, and deposits from, households and NFCs.



deposits from households and NFCs fell by 0.4% and 3.2%, respectively, and by 1% overall, bringing the upward trend of recent years to an end. Despite this drop, the loan-to-deposit ratio in business in Spain only fell by 1 pp, to 85.3%, owing to the greater contraction in lending (see Chart 2.13).

The pass-through of key policy rate hikes to households' and NFCs' term deposits in Spain quickened in 2023 H1. The pass-through¹⁹ of the cumulative increase in the 12-month EURIBOR was particularly notable in the case of NFC term deposit rates, reaching 41% in June 2023, versus 16.3% six months earlier. For household term deposit rates, the pass-through amounted to 23.1%, versus barely 4% in December 2022. Sight deposit rates remained at very low levels, with pass-through reaching 2.3% and 7.8% for the household and NFC portfolios, respectively. Pass-through remains lower than expected based on past experience,²⁰ and comparatively lower than in the euro area as a whole.²¹ However, the average deposit rate could continue to rise in the coming months, given the reduction in, and increase in the cost of, Eurosystem funding (see Chart 2.14).

19 Pass-through is defined as the ratio between the cumulative change (in pp) in the interest rates applied to deposits and the change in the 12-month EURIBOR in the reference period.

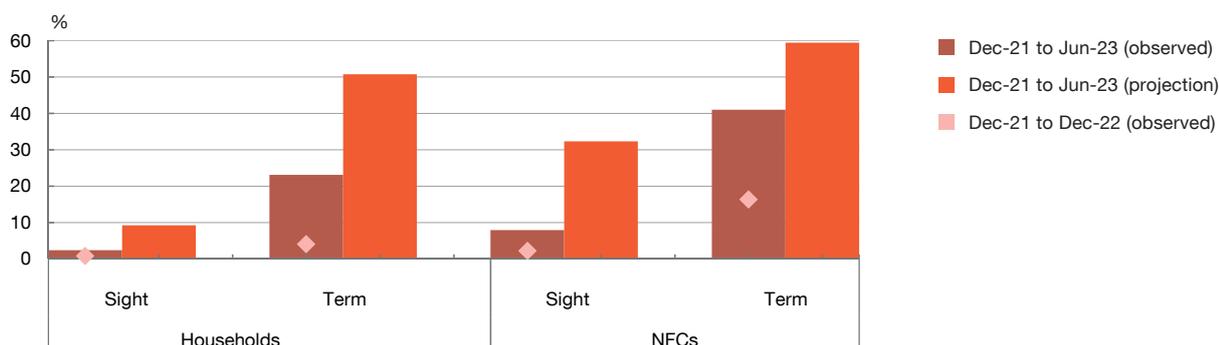
20 The factors that potentially explain the lower pass-through in the current rate hike episode than in past episodes include the EURIBOR's negative starting level, excess liquidity in the system, banks' specific characteristics and the overall sector's market structure. For further details on the effect of these factors, see Alejandro Ferrer, Gergely Ganics, Ana Molina and José María Serena. (2023). "The EURIBOR surge and bank deposit costs: an investigation of interest rate pass-through and deposit portfolio rebalancing". *Financial Stability Review – Banco de España*, 44; Banco de España. (2023). *Annual Report 2022*, pp. 160-163 and 167-168; and ECB. (2023). *Financial Stability Review*, Box 4.

21 For example, on *ECB bank interest rate statistics*, the degree of pass-through for the euro area as a whole in June 2023 was around 24% for deposits from firms and around 8% for deposits from households, while in Spain these figures stood at 15% and 4%, respectively.

Chart 2.14

Monetary policy tightening was passed through to the cost of deposits from households and NFCs more markedly in H1

2.14.a Pass-through of the increase in the EURIBOR to deposit rates (a)



SOURCE: Banco de España.

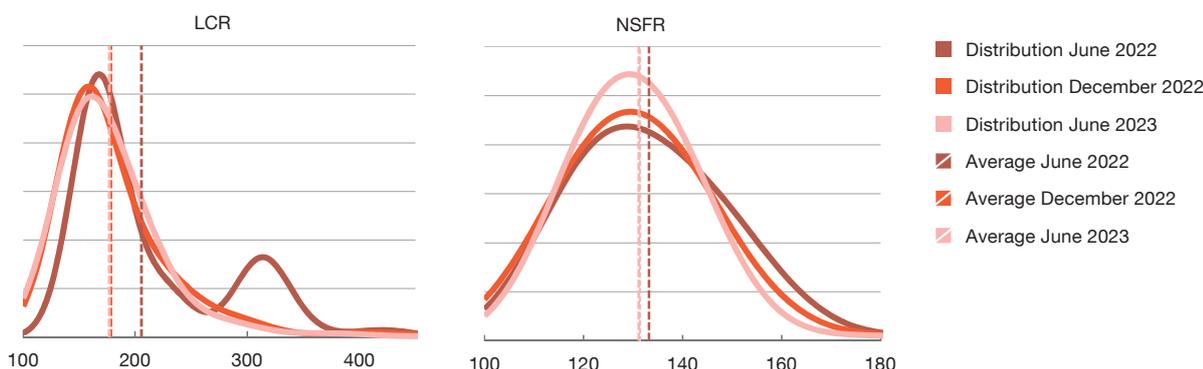
a Pass-through is defined as the ratio between the cumulative change (in pp) in the interest rates applied to deposits and the change in the 12-month EURIBOR in the reference period. Bank deposit rates are projected using a multivariate structural VAR model based on interest rates data reported to the ECB.



Chart 2.15

Spanish banks have a comfortable liquidity position

2.15 Distribution of the LCR and NSFR (a)



SOURCE: Banco de España.

a The charts depict the density functions of the LCR and NSFR for Spanish deposit institutions, weighted by their respective volumes of assets. The density functions are estimated using a kernel estimator, which enables non-parametric estimation and provides a continuous, smoothed graphic representation of the function. The vertical lines depict the average LCR and NSFR for the Spanish banking system as a whole on each of the dates considered.

Yield spreads between sight and term deposit rates led to a slight shift in the relative importance of these funding sources, although sight deposits remain preponderant. In June 2023 households' and NFCs' term deposits increased by 55.6% year-on-year at the expense of sight deposits, which fell by 5.1%. Even so, sight deposits continued to account for 89.6% of the total, in contrast to the level of around 45% observed in the early years of the global financial crisis.

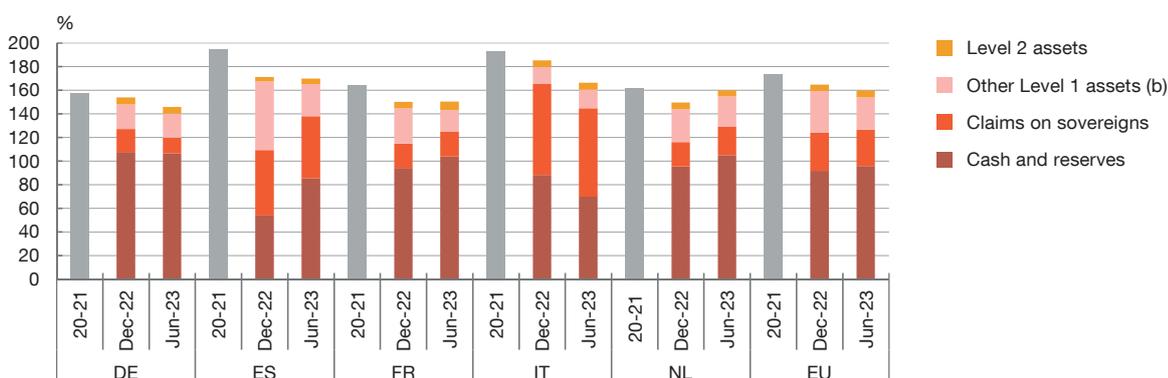
The maturity of a significant volume of TLTROs and debt instruments' lower valuations have reduced Spanish banks' liquidity buffers, although they remain

at comfortable levels. Spanish banks' average liquidity coverage ratio²² (LCR) stood at 176.9% in June 2023, a level similar to that of December 2022 but lower than the 205.6% of June 2022, albeit well above the minimum regulatory requirement (100%). Meanwhile, the net stable funding ratio²³ (NSFR) – which measures longer-term net financing capacity – held steady, amounting to 131.1% in June 2023, compared with 133.2% in June 2022, and also had considerable headroom over the minimum requirement of 100%. Analysis of the distribution among banks of these ratios shows a shift in both, from the upper tail in June 2022 to lower values in June 2023 (see Chart 2.15).

Chart 2.16

The main European banks also had ample headroom over minimum liquidity ratio requirements

2.16.a LCR and composition of liquid assets (a)



2.16.b NSFR and composition of the sources of stable funding



SOURCE: EBA.

- a The grey bars denote the average LCR for December 2020–December 2021. In this period the EBA data do not break down the liquid assets by type.
- b According to the EBA definition, this category includes, among others, claims on central banks, regional governments and local authorities and Level 1 extremely high quality covered bonds.

22 The LCR measures the availability of sufficient liquid assets to cover large outflows of funds in the short term. It is defined as the ratio between a bank's unencumbered liquid assets and potential net liquidity outflows during a 30 calendar-day stress period. A level over 100% indicates that the bank holds sufficient liquid assets to cover potential liquidity outflows in a stress scenario.

23 The NSFR considers the availability of funds for a bank to fund its activity over a one-year time horizon. It is defined as the ratio of a bank's available stable funding to its required stable funding for a period of one year. A level over 100% indicates that the bank has sufficient stable funding to satisfy its financing needs over one year, both in normal conditions and in a stress scenario.

The LCR of the main European banks also remained at comfortable levels in early 2023, albeit with cross-country differences in liquid asset structure. On EBA data, European banks' overall LCR stood at 159.9% in June 2023, down slightly from December 2022 (164.6%). None of the main jurisdictions' LCRs were below 145% (see Chart 2.16.a). With regard to the structure of the liquid assets that would enable banks to withstand these outflows, cash and central bank reserves are the main source of liquidity in the European aggregate and would cover 95.6% of the net outflows considered in the LCR. They are followed by claims on sovereigns and other Level 1 assets, which would cover a further 31% and 27.4% of the net outflows, respectively. As a result, there is a considerable liquidity surplus above total net outflows. The main Spanish banks' sources of liquidity are somewhat more evenly distributed, with cash and reserves also in first place (85.3%), followed by claims on sovereigns (52.6%) and other Level 1 assets²⁴ (27.4%).

The main European banks' NSFR held at the same levels as in prior quarters, with retail deposits as the main source of stable funding. The aggregate NSFR of the main European banks held at its December 2022 level (126%) in June 2023. Retail deposits stand out as the main source of European banks' stable funding, covering 59.9% of the stable funding required over a one-year time horizon. For Spanish banks, retail deposits covered 74.8% in June 2023, the highest proportion – alongside the Netherlands – among the main European jurisdictions (see Chart 2.16.b).

2.1.2 Profitability and solvency

Profitability

Spanish banks' net consolidated profit in 2023 H1 increased by 25% compared with the same period a year earlier, driven mainly by the sound performance of net interest income (see Annex 2). Excluding the temporary levy on banks and other extraordinary items in both years,²⁵ year-on-year growth would have been 33%. The temporary levy on banking sector profits to be paid by banks in 2023²⁶ was already fully accounted for in June 2023 as “other operating expenses”. This

24 This category includes all Level 1 assets other than coins and banknotes, central bank reserves that can be drawn down in times of stress and claims on sovereigns. In particular, the assets in this category include claims on central banks, regional governments and local authorities and Level 1 extremely high quality covered bonds.

25 In 2022 H1 extraordinary losses were recognised as a result of the offices purchased by one bank (€0.2 billion). In 2023 H1 banks recorded the full amount of the extraordinary levy to be paid in 2023, estimated at €1.3 billion according to the [press release](#) issued by the Ministry of Finance on 21 February 2023.

26 According to the regulations governing the levy, payment obligations in 2023 are calculated, for each consolidated group for corporate income tax purposes in Spain, as 4.8% of net interest income and net fee and commission income in 2022. The payment must be completed in September 2023, with an advance payment of 50% of the total in February. Extrapolating the information provided by the Ministry of Finance on the February payment to the entire year, the levy to be paid in 2023 would amount to €1,274 million. The payment obligations in 2024 will work in the same way, based on profits obtained in 2023.

amount represents 8.2% of Spanish institutions' consolidated net profit in the first half of 2023 (4.1% of profit in annualised terms).

The improvement in net profit prompted an increase in the return on assets (ROA), which rose to 0.8%, compared with 0.6% in June 2022; meanwhile the return on equity (ROE) stood at 12.1%, 2.1 pp higher than a year earlier. Spanish deposit-taking institutions' aggregate profitability rose well above their cost of equity (COE), which stood at around 6.5% in the first half of the year.²⁷ Including a higher inflation risk premium in the COE could raise it to 8.5%, still clearly below the ROE level. Without the impact of the above-mentioned levy and extraordinary profit, ROA would increase by 6 bp in June 2023 and by 1 bp in June 2022, while ROE would stand at 13.1% (3 pp more than in the first half of last year) (see Chart 2.17.a).

Ordinary profit from business abroad at major institutions with an international presence increased by 10.8% year-on-year in 2023 H1. Profit grew very significantly in Mexico (44.7%), with its share in these institutions' overall profit rising to 35.1%, up 7.3 pp on a year earlier (see Chart 2.17.b). These earnings, together with growth in the United Kingdom and Türkiye, allowed institutions to offset the declines in business in Brazil (-39.7%) and the United States (-38.8%).

Spanish banks' COE has risen very slightly since the beginning of 2023, but ROE has grown much more. The rise in the real risk-free rate since early 2022 has been more than offset by declines in the stock market risk premium and the Spanish banking sector risk premium, which has led to a decrease in COE of around 2.2 pp since December 2021, with an increase of only 0.2 pp after December 2022 (see Chart 2.18). This decline in COE stands in contrast to the aforementioned 2 pp increase in ROE so far in 2023 (excluding extraordinary profit, ROE was already clearly increasing from early 2022).

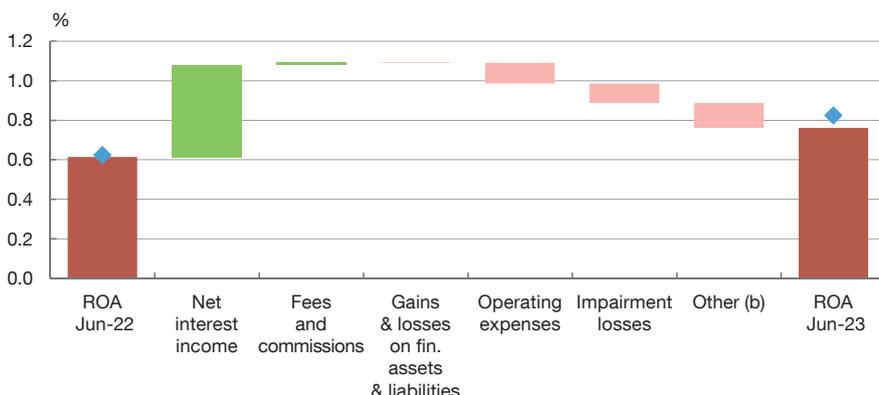
The current context of rising monetary policy interest rates resulted in year-on-year growth in banks' net interest income at consolidated level of 27% in the first half of 2023. The improvement in net interest income, somewhat larger in business in Spain than in business abroad, owed mainly to the price effect of higher interest rates, which has so far been passed on to a greater extent to market lending rates than to market deposit rates (see Chart 2.19). Credit growth abroad also contributed, albeit much more modestly than in previous years, to the improvement in net interest income at consolidated level, while the quantity effect was negative for business in Spain due to the contraction in lending. Higher interest rates increased income from deposits at

27 COE is unobservable and its estimation may vary significantly depending on the model used. Even allowing for the uncertainty surrounding these COE estimates, ROE would stand at the higher end of the confidence band. See Luis Fernández Lafuerza and Javier Mencía. (2021). "Estimating the cost of equity for financial institutions". Financial Stability Review - Banco de España, 40, pp. 49-66.

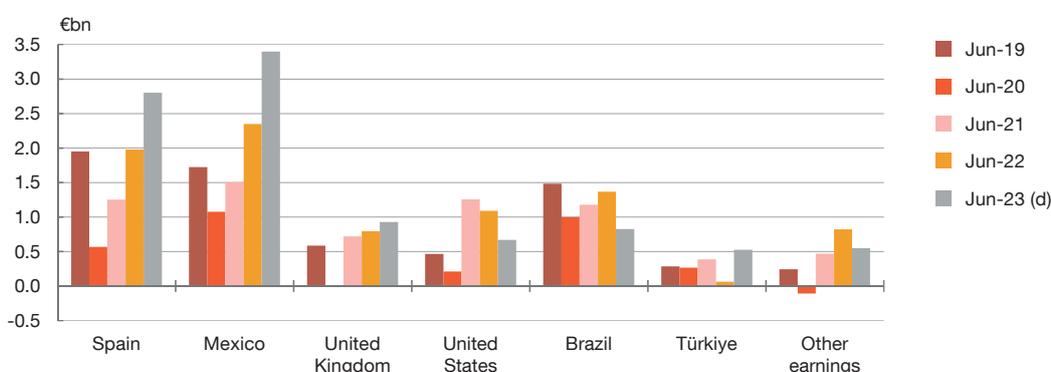
Chart 2.17

Consolidated profit grew 25% in 2023 H1 thanks to the strong performance of net interest income and, most notably, business in Mexico and Spain

2.17.a Breakdown of the change in profit. Consolidated net profit as a percentage of ATAs (a)



2.17.b Geographical distribution of ordinary profit attributable to the parent of banks with the most significant international activity (c). Consolidated data



SOURCES: Banco de España and banks' financial reporting.

- a The red (green) colour of the bars denotes a negative (positive) contribution of the corresponding item to the change in consolidated profit in June 2023 compared with June 2022. The blue diamonds denote the ROA excluding extraordinary losses in June 2022 from the purchase of offices by a bank (-€0.2 billion) and the impact of the 2023 temporary levy on the banking sector in June 2023 (-€1.3 billion).
- b Includes, among other items, the extraordinary losses and temporary levy on the banking sector mentioned in the previous note.
- c Among the banks with significant international activity, this group includes the three in which such activity is most important and longest-running, with profit measured excluding non-recurring items in the period considered. The category "Other earnings" includes earnings in other countries and those of the banks' corporate centres.
- d At June 2023 ordinary attributable profit had the following geographical distribution, from most to least important: Mexico (35%), Spain (29%), United Kingdom (10%), Brazil (8%), United States (7%), Türkiye (5%) and other earnings (6%).



central banks, which accounted, in annualised terms and at consolidated level, for around 28 bp of ROA in June 2023, up from 9 bp 12 months earlier.

Net interest income could fare worse in the coming quarters. A sharper decline in lending in Spain and poorer performance globally due to the economic slowdown could lead to a more negative quantity effect, while the contribution of the price effect could weaken as higher interest rates are gradually passed through to bank deposit rates. Additionally, the setting by the ECB of a 0% rate for the remuneration of the minimum reserves held by institutions²⁸ would, as from 2023 Q4, put further

28 For more details, see the [ECB press release](#) of 27 July 2023

Chart 2.18

The moderation in risk premia has led to a reduction in COE

2.18.a Change in COE, its components and ROE since December 2021 (a)



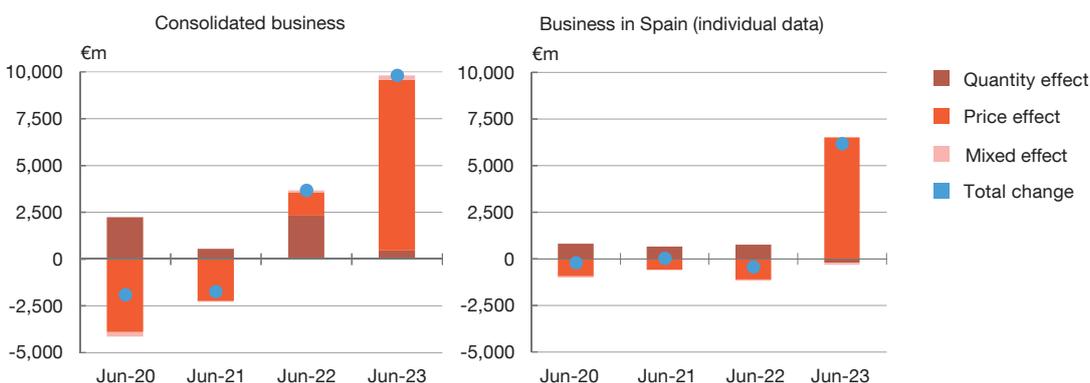
SOURCES: Banco de España, Datastream and Consensus Economics.

a The chart shows the changes in ROE, COE and its components relative to December 2021. The cost of bank equity is estimated based on a dividend discount model, see Luis Fernández Lafuerza and Javier Mencía. (2020). "Recent developments in the cost of bank equity in Europe". *Economic Bulletin - Banco de España*, 4/2020, Analytical Articles. The cost of equity can be decomposed into components relating to the real risk-free rate, the European stock market risk premium and banking sector risk premium (the product of the Spanish banking stock market's beta minus one and the European stock market risk premium). The real risk-free rate is proxied by the inflation-linked French government bond rate.

Chart 2.19

The increase in net interest unit margins is driving up net interest income

2.19.a Breakdown of the change in net interest income (a)



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 values of the initial period. The mixed 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.

pressure on their net interest income, which could be reduced by around €560 million per year, with an impact on consolidated ROA of somewhat more than 1 bp.

Consolidated net operating income grew by 23% in the first half of 2023 compared with the same period of 2022 thanks to the strong performance of net interest income, despite the notable increase in operating costs in a high-inflation environment. These costs grew by 9.1% year-on-year. Net fee and commission income, which grew by 2.6% year-on year, also contributed, albeit more

modestly, to generating gross income, while income on financial assets and liabilities fell by 1%.

Gross operational risk losses rose until end-2023 H1, while their composition remained relatively stable. Gross operational risk losses grew by 8.5% year-on-year in June 2023. Losses due to inappropriate conduct and business practices remained the main component (37.8%) of these losses, followed by those resulting from external fraud cases faced by institutions (27%). In this regard, of note is the establishment of a joint company²⁹ promoted by the three largest Spanish banks with the aim of exchanging information to help prevent financial fraud.

Impairment losses increased by 26.8% year-on-year at consolidated level, driven by significant growth in such losses recognised on banks' international activity. For business in Spain, impairment losses fell by 2.8% in the first half of 2023 compared with those recognised a year earlier, in line with the credit quality developments discussed in the preceding section.

The Spanish banking sector proved to have a significant advantage over the European banking sector in generating earnings via net interest income in the first months of 2023, but also had a higher cost of credit risk. EBA data show that, to June 2023, the main Spanish banks' aggregate ratio of net interest income to assets was in line with the median of the European banking systems and well above the European Union (EU) weighted average.³⁰ Income from fees and commissions and operating expenses relative to total assets also behaved in line with the European median. However, the impact of the extraordinary levy on banks (which has worsened Spanish banks' relative position in terms of net operating income compared with previous years) and, especially, the higher cost of the risk assumed, place Spanish banks' ROA below the 25th percentile of the distribution, although it remains slightly above the EU weighted average. The differences between the European median and the European average, and the increase in the dispersion of profitability at the high end of the distribution observed in the past year, owe to the strength of the income statements of banks in smaller and, particularly, eastern European countries (see Chart 2.20).

Despite the strong profit obtained by the Spanish banking sector, the current macro-financial setting requires that institutions exercise prudence when managing their profit. In this regard it should be noted that 44% of the profit obtained in 2022 was used to pay dividends or buy back shares, while just over 32% was used

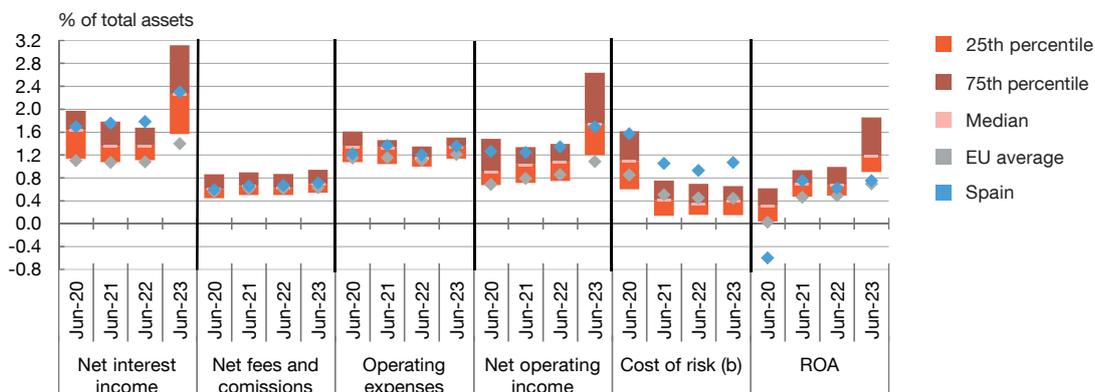
29 In July 2023 the three largest Spanish banks announced the creation of FrauDfense, which aims to bring together their anti-fraud initiatives.

30 The percentiles and the median have been calculated using the values published by the EBA for the various European countries, which in turn are based on a sample of each country's main institutions. The EU average is the average weighted by size of all the European institutions considered in the exercise.

Chart 2.20

Compared with European banks, Spanish institutions have generated higher net interest income, albeit with a greater cost of risk

2.20.a European comparison of the main profitability variables (a). Consolidated data



SOURCE: EBA

a Percentiles calculated based on the aggregate financial ratios published in the European Banking Authority's Risk Dashboard for each of the EU banking systems.
 b The cost of risk is defined as impairment loss charges divided by gross lending.

to build up voluntary reserves and 23% to offset the negative impact of “other comprehensive income” on equity. The tightening of financing conditions for firms and households could lead to a deterioration in credit quality in the coming quarters, while the increase in banks’ retail funding costs could sharpen. In consequence, banks should follow a prudent provision and capital planning policy that allows them to use the higher profits to boost sector resilience.

Solvency

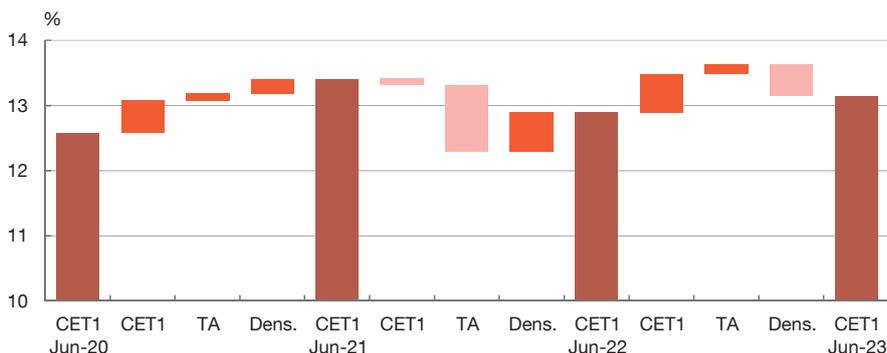
The Common Equity Tier 1 (CET1) ratio increased by 25 bp to June 2023 with respect to the same month of the previous year, to stand at 13.1%. This increase owed mainly to the positive contribution of CET1 capital (the numerator of the ratio), which grew year-on-year by 4.6% and more than offset the negative contribution of risk-weighted assets (RWAs) (the denominator of the ratio),³¹ which grew year-on-year by 2.7% (see Chart 2.21.a). The CET1 ratio is thus 50 bp higher than at end-2019, before the pandemic. By component, of note was the contribution to RWA growth of the higher RWA density, now standing at 37.4%. The increase in RWA density is mainly due to changes in RWA composition owing to the notable contraction in exposures to central banks and general government, whose risk

31 RWAs may be decomposed into two components as the product of total assets and RWA density. Therefore, the contribution of RWAs would be the sum of the contribution of its two components: total assets and RWA density.

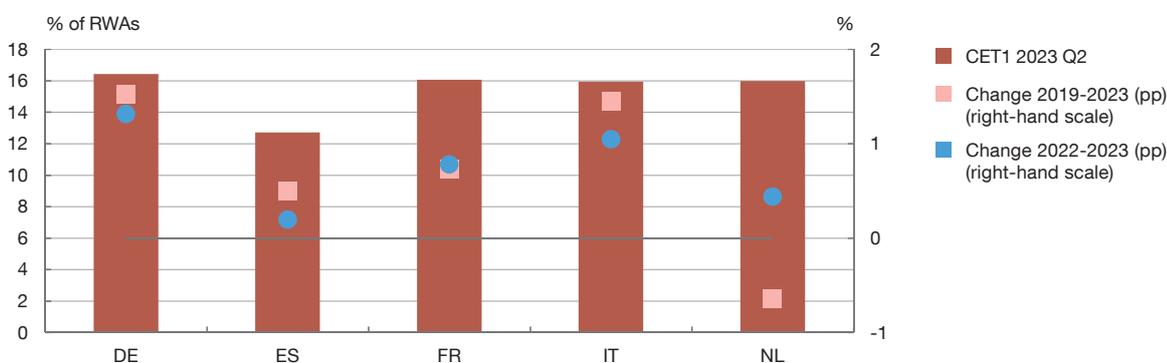
Chart 2.21

Spanish banks' CET1 ratio has improved since June 2022

2.21.a Breakdown of the change in the CET1 ratio between 2020 and 2023 (a). Consolidated data



2.21.b European comparison of the CET1 ratio. Consolidated data. June 2023



SOURCES: EBA and Banco de España.

a The CET1 is broken down into the change in CET1, total assets (TA) and density (Dens.), where density is calculated as the ratio of RWAs to total assets. Therefore, the CET1 ratio is calculated as CET1 to TA x Dens. The orange (pink) bars denote positive (negative) contributions from components.



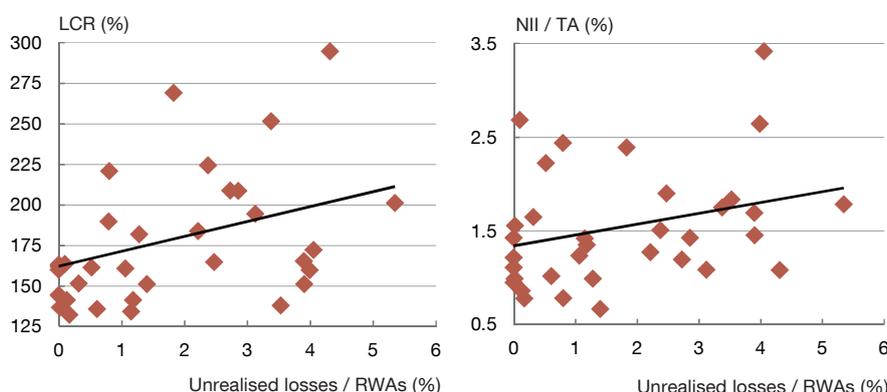
weightings are zero or very low. Nevertheless, RWA density is almost 5 pp lower than at end-2019.

Spanish banks' CET1 ratio remains below those observed in the banking systems of other large European economies. At end-2023 H1, the CET1 ratio for Spain was smaller than that observed for countries such as Germany, France, Italy and the Netherlands (see Chart 2.21.b). Despite the improvement in the year-on-year ratio for Spain, it was lower than those of its peers, leading to a widening of the gap between them.

The EBA's ad hoc analysis of the main European banks' bond portfolio found unrealised losses relative to RWAs were moderate, on average, although there is some heterogeneity across institutions. Based on the sample of institutions participating in the 2023 stress test, the EBA conducted an ad hoc analysis of

Unrealised losses on the debt securities portfolio would have a limited impact on European banks as a whole

2.22.a Unrealised losses as a percentage of RWAs against LCR (l-h panel) and against net interest income to total assets (r-h panel) (a). Consolidated data. December 2022



SOURCES: EBA and Capital IQ.

a Unrealised losses on the debt securities portfolio are obtained from the results of the ad hoc exercise conducted by the EBA and the ECB. They are calculated as the fair value less the book value of the debt securities portfolio at amortised cost as at December 2022, net of derivative-hedged positions. The sample contains 37 banks that participated in the 2023 stress test and that also have information in Capital IQ, from which the information on RWAs, total assets (TA) and net interest income (NII) is obtained.

unrealised losses³² on bond portfolios at amortised cost,³³ also considering the derivatives held by banks to hedge these positions. The exercise showed that unrealised losses in December 2022 (and February 2023) on bond portfolios at amortised cost relative to RWAs are small on average (1%), but there is some dispersion (between -0.1% and 5.3%).³⁴ It is important, however, to bear in mind that, even in a liquidity stress scenario, the full realisation of these losses is highly unlikely insofar as a bank has alternative liquidity sources and capacity to generate earnings.

There is a positive correlation between unrealised losses on debt securities recorded at amortised cost (as a percentage of RWAs) and LCRs and/or net interest income generation capacity (see Chart 2.22). In particular, the institutions with higher unrealised losses in this portfolio (as a percentage of RWAs) have high LCRs. Therefore, despite a higher exposure, these banks would be under less pressure to liquidate these assets and thus realise the unrealised loss, as they

32 See EBA. (2023). *Ad-hoc analysis on bank bonds holdings*.

33 Bonds classified at amortised cost for accounting purposes do not need to be continuously measured at market value, as banks are expected to hold them to maturity. This significantly reduces the sensitivity of banks' bottom line to changes in interest rates, as it does not reflect unrealised losses or gains in these instruments due to interest rate rises or cuts.

34 This ad hoc analysis also provides the unrealised losses at February 2023, as an update to the holdings two months earlier. In any event, the February data do not entail significant quantitative or qualitative changes to the conclusions obtained from the December 2022 data.

would have better alternatives to obtain liquidity. A positive association can also be seen in the case of net interest income generation (relative to total assets), highlighting the greater profit-generating capacity of institutions with greater unrealised losses.

Results of the EU-wide stress test published by the European Banking Authority

The EBA's EU-wide stress test shows that the aggregate CET1 capital ratio of participating institutions increases by 1.4 pp under the baseline scenario and declines by 4.6 pp under the adverse scenario. As a result, the group of participating institutions would retain their overall resilience under this scenario, since they finish the exercise with an aggregate solvency ratio of 10.4%, above the regulatory minimum (see Chart 2.23). Of note among the factors conducive to a higher overall resilience of participating institutions are higher initial CET1 ratios (15% of RWAs on average in 2022) and a better initial situation in terms of income, profitability and asset quality than in previous years.³⁵

On average, the participating Spanish institutions saw a 2.8 pp increase in the CET1 ratio under the baseline scenario and capital consumption of 2.4 pp under the adverse scenario, faring better than the EU aggregate in both cases. As in the stress tests coordinated by the EBA in 2021 and 2018, the participating Spanish institutions had a lower capital ratio at the outset (12.4%) than European banks overall (15%), but experience a smaller negative impact under the adverse scenario and have a greater capacity to generate capital revenue under the baseline scenario. As a result, the ratios obtained at the end of the exercise for Spanish banks are closer to the European average. In particular, their ratio under the adverse scenario is 10%, compared with the European average of 10.4%.

The results of the top-down stress tests conducted by the Banco de España also show that the Spanish banking sector as a whole is highly resilient. Using the methodological framework of the Forward Looking Exercise on Spanish Banks (FLESB),³⁶ the CET1 ratio for significant and less significant Spanish institutions as a whole would increase by an estimated 1.3 pp under the baseline scenario and decrease by an estimated 3.3 pp under the adverse scenario. Additional adverse shocks are applied to credit risk under the FLESB framework compared with the EBA exercise, based in particular on an estimate of potential unrealised losses arising from the economic tensions in the period 2020-2022. This largely explains

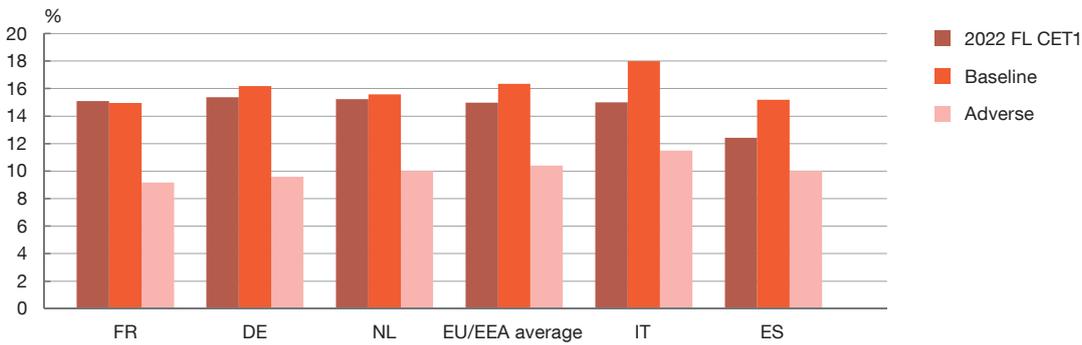
³⁵ These results were published in July 2023 (see the results of the EBA's 2023 EU-wide stress test). The exercise covered 70 EU credit institutions, representing around 75% of EU bank's total assets, of which 8 are Spanish institutions (BBVA, Bankinter, CaixaBank, Kutxabank, ABANCA, Sabadell, Santander and Unicaja).

³⁶ The FLESB is a top-down methodology developed internally by the Banco de España, which applies the same scenarios, assumptions and models consistently across all of the banks analysed.

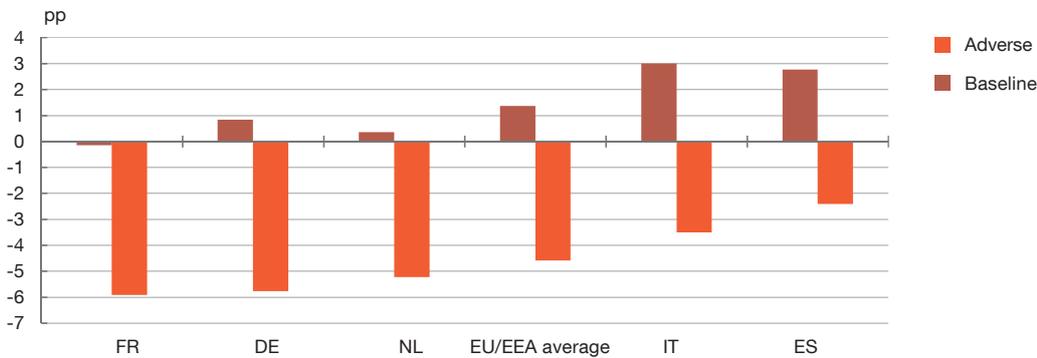
Chart 2.23

The EBA stress test shows Spanish banks' capital consumption is below average

2.23.a Initial FL CET1 ratio and results of the EBA's stress test



2.23.b Change in the FL CET1 ratio at the end of the exercise's horizon



SOURCE: EBA.

the worse outcome, although there are other methodological differences.³⁷ Box 2.2 presents the results of this Banco de España exercise in detail.

2.2 Non-bank financial sector and systemic interconnections

2.2.1 Non-bank financial sector

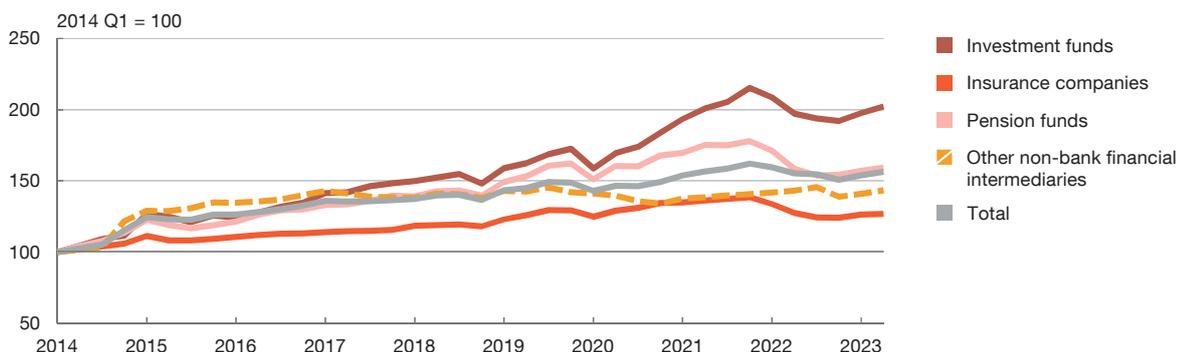
The asset volume of the European non-bank financial sector has stabilised in 2023, with growth in certain sectors. The decrease in the volume of this sector's assets that began in early 2022 came to a halt at the end of last year, and some growth has been observed recently, both in Spain and in the euro area as a whole (see Chart 2.24). This recovery stems from financial markets faring better in this

³⁷ In particular, the EBA exercise assumes a static balance sheet, while its size may oscillate dynamically in the FLESB depending on the scenario. As for the sample, the FLESB covers both significant and non-significant Spanish banks, whereas, as mentioned above, the sample of Spanish institutions in the EBA exercise is limited to eight significant institutions.

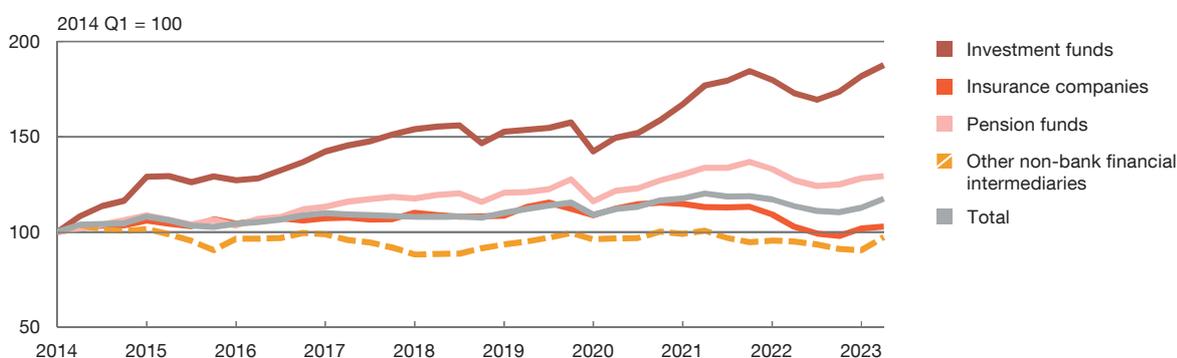
Chart 2.24

The non-bank financial sector's total assets have stabilised after the downward trend that commenced in early 2022

2.24.a Euro area (a)



2.24.b Spain (a)



SOURCES: Banco de España (Financial Accounts) and ECB (Quarterly Sector Accounts, Balance Sheet Items).

a In 2014 Q1 the total assets of money market and non-money market investment funds, insurance companies, pension funds and other non-bank financial intermediaries in the euro area amounted to €8,626 billion, €6,618 billion, €1,767 billion and €15,392 billion, respectively. For the equivalent sectors in Spain, total assets amounted to €203 billion, €285 billion, €117 billion and €571 billion, respectively, in 2014 Q1.

period, which has driven up the value of the assets under management and, to a lesser extent, from net purchases of these assets. This is the case of Spanish investment funds in particular (see Chart 2.24.b), which have seen a notable increase in investment flows in 2023 and whose investment portfolio composition has shifted towards fixed-income securities (mainly sovereign debt), as detailed below.

The bouts of financial stress in autumn 2022 and early 2023 were short-lived, but significant vulnerabilities persist in the sector. The turmoil does not appear to have eroded the normal functioning of these intermediaries or of the markets in which they participate. That said, the presence of potential vulnerabilities in this sector and their financial stability implications should be kept in mind. These include the pro-cyclical nature of their customers' net contributions and the overlap between the asset holdings of different financial sector segments, which could fuel bouts of tension and sharpen their effects. The dependence of certain banking systems on

non-bank financial intermediation (NBFI) is also noteworthy.³⁸ In the case of Spain, the relatively limited size of the NBFI segment (compared with other jurisdictions) is a mitigating factor, but the Spanish financial system is nevertheless interconnected with international NBFI.

Investment funds

Capital inflows to Spanish investment funds have increased significantly, boosted by flows into fixed-income funds, while they have remained more stable for the rest of the euro area. According to Refinitiv, during the first nine

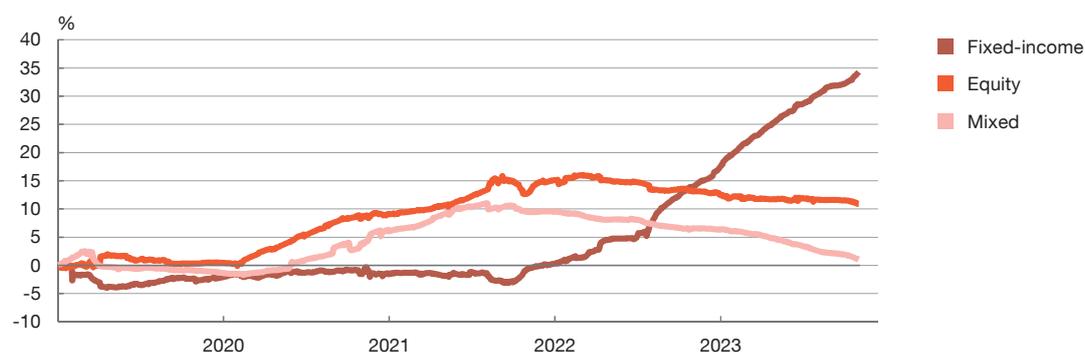
Chart 2.25

Capital inflows to Spanish fixed-income investment funds have risen significantly

2.25.a Fund flows in the euro area excluding Spain, as a % of asset volume at the start of 2020 (a) (b)



2.25.b Fund flows in Spain, as a % of asset volume at the start of 2020 (a)



SOURCES: Refinitiv and Banco de España.

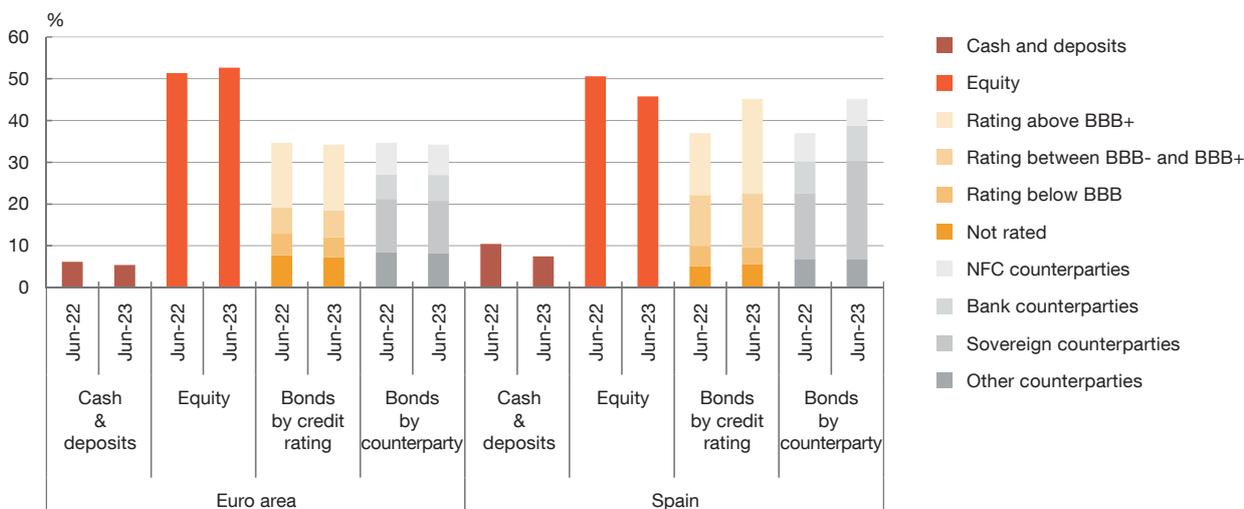
- a Cumulative change in investment fund net capital inflows and outflows since 15 January 2020. This change is expressed as a percentage of the assets of the funds at the start date. The series draw on a representative sample, prepared by Refinitiv, of funds domiciled in euro area countries.
 b Includes funds domiciled in Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands and Portugal.

38 See *BIS Quarterly Review*, September 2023 (pp. 33-45 in particular). The feature analyses the sources of bank funding (traditional deposits, repos, interbank lending) and finds that during the turmoil in March bank funding rotated from the non-financial sector to non-bank financial institutions. It also analyses the cases of Switzerland and the United States.

Chart 2.26

The share of public debt in Spanish investment fund portfolios has increased

2.26.a Characteristics of investment fund portfolios (a) (b) (c)



SOURCES: Banco de España (Financial Accounts) and ECB (Quarterly Sector Accounts, Securities Holdings Statistics by Sector).

a All the variables are measured as a percentage of total financial assets.

b Only non-money market investment funds are considered to calculate the level of cash and deposits. For the other variables, both non-money market investment funds and money market funds are considered.

c "Equity" includes listed and unlisted shares, other ownership interests and investment fund units. "Bonds" includes short and long-term debt securities.

months of 2023 cumulative capital inflows amounted to almost 20% of the assets managed by fixed-income funds at end-2022. This stands in contrast to the worse relative performance of equity and mixed fund flows (see Chart 2.25).

Fixed-income fund growth is boosted by their high yield to maturity in a higher interest rate setting. The relatively low Spanish deposits rate, which has had a more muted response to the monetary policy tightening,³⁹ also helps explain the increase of flows in this category. In the rest of the euro area, the recovery in capital inflows to fixed-income funds has been much more modest.

The composition of Spanish investment funds' portfolio is changing, with government debt gaining importance. This redistribution has come hand in hand with a substantial increase in the share of instruments with an investment grade rating, with instruments with the highest credit rating (above BBB+) increasing the most (see Chart 2.26). Lastly, the cash holdings and deposits of funds domiciled in Spain have continued to decline, gradually converging to euro area fund levels, which have remained stable.

39 See Alejandro Ferrer, Gergely Ganics, Ana Molina and José María Serena. (2023). "The EURIBOR surge and bank deposit costs: an investigation of interest rate pass-through and deposit portfolio rebalancing", *Financial Stability Review – Banco de España*, 44, pp. 9-38.

Specialised lending institutions

Lending by specialised lending institutions (SLIs) increased in the past 12 months, with their NPL ratios holding steady. The annual growth rate of lending by SLIs stood at 4.5% in June 2023. In the consumer segment, in which these institutions specialise, growth reached 10.3%. In the 12 months to June 2023, the NPL ratio remained stable at 6.3% overall, and at 4.1% in the consumer segment.

Pre-tax profit of SLIs as a whole fell year-on-year in June by 14.7%. The notable growth in impairment losses (69.1%) and the fall in net interest income (-7.3%) are behind this decline. Profit as a percentage of total assets stood at 1.9% in June 2023, a much higher figure in any event than the banking sector's.

Insurance companies and pension funds

The volume of insurance sector premia grew significantly year-on-year (23.7%) in the first half of 2023. First, the volume of life insurance premia increased sharply by 52.8%, while in the non-life business⁴⁰ they rose by 6.7%. The volume of life insurance premia as a percentage of the total has grown significantly (from 36.6% in 2022 to 45.2% in 2023). Insurance companies are also increasing the placement of investment products to retail customers that cannot find the desired remuneration in bank deposits.

The profitability and solvency of the insurance sector remained largely unchanged in the first half of 2023 compared with a year earlier. Specifically, ROE fell slightly to stand at 5.9% in 2023 Q2, down 0.5 pp on a year earlier. The solvency capital requirement (ratio of eligible own funds to mandatory capital for solvency purposes) was 234.1% in 2023 Q2, 1.1 pp less than at end-2022.

Pension fund contributions decreased from mid-2022, although their total assets and annual average returns increased. Gross contributions to pension funds fell by more than 19% in the last 12 months, largely owing to the lower limit on tax deductions for contributions to individual pension schemes. Total pension scheme assets increased by 2.6% in June 2023, compared with the same month a year earlier. Although long-term (25 years) profitability continued its downward trend, standing at 2.3% in June 2023 (14.9% below the June 2022 value), pension funds' annual average returns regained positive levels, rising from -6% in June 2022 to 3.7% in June 2023.

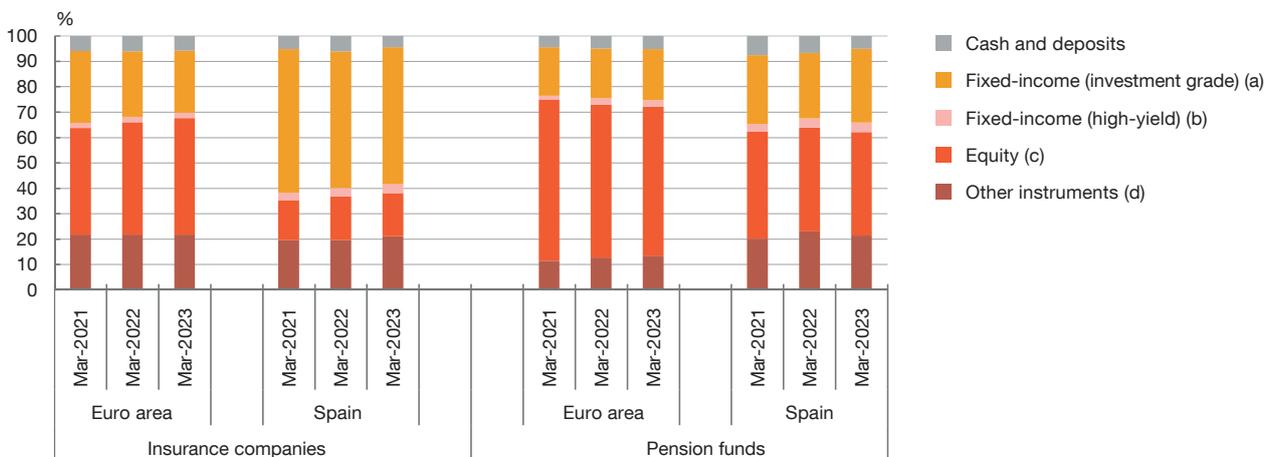
The composition of insurance company and pension fund assets has remained relatively unchanged over the past two years, both in Spain and in the euro

40 Non-life business includes car, multi-risk and other insurance.

Chart 2.27

A European comparison shows that the share of fixed-income securities is greater for Spanish insurance companies and pension funds

2.27.a Composition of insurance company and pension fund balance sheets



SOURCES: Banco de España (Financial Accounts) and ECB (Quarterly Sector Accounts, Securities Holdings Statistics by Sector).

- a Investment grade fixed-income securities include short and long-term debt securities rated BBB- or higher.
- b High-yield fixed-income securities include short and long-term debt securities rated below BBB-.
- c Equity includes listed shares, unlisted shares, other equity and investment fund shares.
- d Other instruments include fixed-income securities for which no credit rating has been found; loans; insurance, pensions and standardised guarantees; financial derivatives; and other accounts receivable excluding trade credits.

area. Fixed-income (mainly investment grade) securities continue to account for a higher share of insurance companies' assets in Spain (69% compared with the euro area average of 35%). However, over the last two years there has been an increase, albeit very moderate, in the share of equity instruments, to 17% of Spanish insurance companies' investment portfolio (see Chart 2.27). Conversely, in the pension fund sector fixed-income securities as a share of total assets have increased moderately, both in the investment grade segment (by 1 pp) and in riskier segments (by 1 pp). These instruments account for a higher proportion of total financial assets in Spanish funds (41%), compared with the rest of the euro area (28%), but there are fewer structural differences than in the insurance sector (see Chart 2.27).

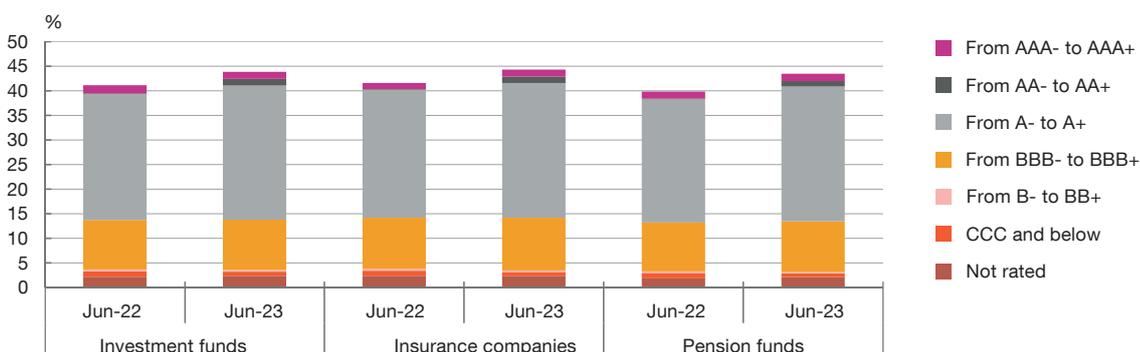
2.2.2 Systemic interconnections

Common holdings of the banking sector and the other resident financial sectors increased year-on-year in 2023 Q2. In particular, the greatest increase (by almost 4 pp) (see Chart 2.28) was seen in the common holdings of banks and investment funds, followed closely by the increases in the common holdings of banks and insurance companies and banks and pension funds (approximately 3.5 pp). Most of this growth has been in the highest-rated securities (A- to AAA+), with the largest increase recorded in the A- to A+ category, which predominantly comprises government debt instruments. Thus, the possible risk stemming from the

Chart 2.28

Common holdings of banks and other financial sectors increased moderately

2.28.a Share of common holdings of banks and other financial sectors in the banking sector's securities portfolio (a)



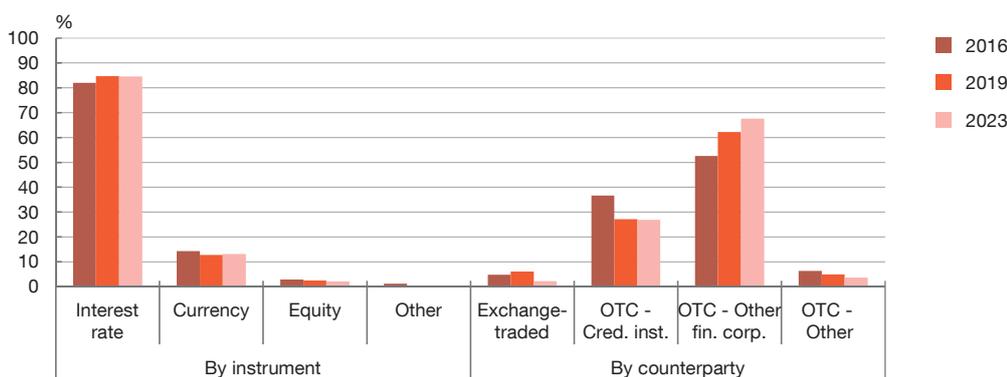
SOURCE: ECB (Securities Holdings Statistics by Sector).

a The banking sector's portfolio includes securities also held by other sectors in their portfolios. The bars show the share of the common holdings of banks and other Spanish financial sectors in the banking sector's securities portfolio, broken down by credit rating.

Chart 2.29

Interest rate derivatives account for the bulk of such exposures for banks

2.29.a Breakdown by instrument and counterparty. Notional volume. Consolidated data (a)



SOURCE: Banco de España.

a Exposure relating to exchange-traded derivatives is calculated as the difference between total exposure to derivatives and exposure to OTC (bilateral agreements) counterparties.

increase in common holdings is offset by the fact that this increase in concentrated in securities with the highest credit ratings.

Banks' exposure to derivatives markets remained relatively stable in the 12 months to June 2023. The share of derivatives instruments on banks' balance sheets remained broadly the same as in 2022 (3.8% of banks' assets in June 2023 in the case of asset derivatives and 3.6% in the case of liability derivatives). By instrument, interest rate derivatives continue to account for the bulk of these exposures (see Chart 2.29). This type of derivatives may be used for hedging fixed-

income and other securities held by banks, thus mitigating losses in the event, for example, of an interest rate hike. The over-the-counter (OTC) segment, in which the parties enter into agreements directly, outside a regulated exchange (although these contracts may subsequently be cleared at a clearing house), accounts for a large proportion of these instruments' counterparties, with non-bank financial intermediaries also gaining importance among OTC derivatives' counterparties.

The crypto-currency market has expanded in 2023 to date, but has not regained its pre-2022 correction level and remains small compared with the financial system as a whole. The MVIS CryptoCompare Digital Assets 100 Index, comprising 100 of the main traded crypto-assets, has risen by around 45% since the beginning of the year, underpinned by the considerable increase in the trading price of some of the main unbacked crypto-currencies (such as Bitcoin and Ethereum). Although the size of these markets has increased over time, albeit with fluctuations, the risks for financial intermediaries arising from their exposure to these assets remain contained given their few interconnections with the traditional financial system.⁴¹

41 See the reference in Section 3.2 to the [recent ESRB analysis](#) of the risks linked to crypto-assets and the [Special Chapter](#) on crypto-assets in the spring 2022 *Financial Stability Report*.