2

FINANCIAL SECTOR RISKS AND RESILIENCE

The end of the monetary tightening cycle and the prospect of further policy interest rate cuts have encouraged stronger growth in lending to the resident private sector in Spain. The stock of such lending has once again risen in recent quarters, helping to moderate its decline in year-on-year terms, to a lesser fall than at end-2023. This uptick can also be seen in new lending to both households and non-financial corporations (NFCs). In terms of the quality of the aforementioned credit, troubled loan ratios remain stable with no significant impairments.

The change in the monetary policy stance has also affected the average interest rates on the Spanish non-financial private sector's outstanding loan and deposit amounts, with the former decreasing slightly in 2024 Q3. This did not prevent net interest income from continuing to grow to June 2024. It has, therefore, continued to contribute significantly to the growth of Spanish bank profitability, which remains one of the highest among the main European countries.

Amid persistent geopolitical and macroeconomic uncertainty (see Chapter 1), maintaining a sound solvency position is the best means of safeguarding the resilience of the banking sector at the individual and systemic levels. In this regard, the system-wide CET1 ratio saw a slight year-on-year improvement in June 2024, but it was modest compared with the growth in profitability. The Spanish banking sector's CET1 ratio remains below that of its European peers.

The plan to phase in the activation of the countercyclical capital buffer for exposures located in Spain over the coming quarters (see Chapter 3) is intended to buttress the loss-absorbing capacity of Spanish banks and make it easier for them to help them continue their essential role in credit intermediation should significant cyclical systemic risks materialise. In this respect, the latest tests performed by the Banco de España show that the sector has an adequate degree of aggregate resilience under the various scenarios of macro-financial deterioration. Nevertheless, some heterogeneity can be observed across banks and, furthermore, the most adverse scenarios appear to be linked to a reduced credit supply to the economy.

The non-bank financial (NBF) sector is on a growth trajectory in Spain and the rest of the euro area, driven particularly by investment funds and, within that segment in the case of Spain, especially by fixed income funds. There are no significant changes in the risks arising from the interconnectedness between the banking and NBF sectors in Spain and the rest of the euro area.

2.1 Deposit institutions

2.1.1 Balance sheet structure, risks and vulnerabilities

Credit risk

Since 2024 Q2, the stock of lending to the resident private sector in Spain has returned to short-term growth. The seasonally adjusted stock grew by 0.5% between May and August 2024, just over 0.2 percentage points (pp) above the increase from February to May. Additionally, May 2024 marked the first time this stock increased since 2022 Q4. (see Chart 2.1.a). Similar developments were seen in loans to households and, even more markedly, in loans to the non-financial corporate sector.

As a result, the year-on-year decline in the stock of loans has been gradually slowing in 2024 to date. The outstanding credit granted by deposit institutions to the resident private sector in Spain fell by 1.2% year-on-year in June 2024. This fall is 1.3 pp below the year-on-year contraction recorded in June 2023 and 2.2 pp less than that seen at end-2023. The year-on-year rate of change in real terms rose from -6.7% in December 2023 to -4.5% in June 2024 (see Chart 2.1.b). Lending to both corporate sectors and households contributed to this change in 2024 H1 (see Chart 2.1.c). Data available to August 2024 point to the year-on-year change in this balance levelling off in H2.[1]

In lending to households, there was a minor year-on-year decline in lending for house purchase and a significant increase in consumer credit. Overall, lending to households fell by 0.7% year-on-year in June 2024 (a decline 1.6 pp lower than in December 2023), with the drop in lending for house purchase (-1.4% year-on-year, a decline 1.7 pp lower than at end-2023) standing in contrast to the growth in other lending to households (2.1%), especially in consumer lending (up 5.7%, against 2.1% in December 2023). Within this latter category, the share of loans for the purchase of durable goods held steady, at 68.5% in June 2024, just 0.5 pp less than in June 2023.

Credit flows to the non-financial private sector in Spain have shown striking momentum in recent quarters (see Chart 2.2.b). Three-month cumulative seasonally adjusted flows of new credit exceeded their 2022 Q3 level in August 2024, at the outset of the interest rate hiking cycle. In fact, these flows have been recovering since 2023 Q2 in both lending to households and lending to non-financial corporations and sole proprietors. This recovery was particularly strong to May 2024. Since then, new lending to corporate sectors has stabilised somewhat, while lending to households has shown even greater dynamism.

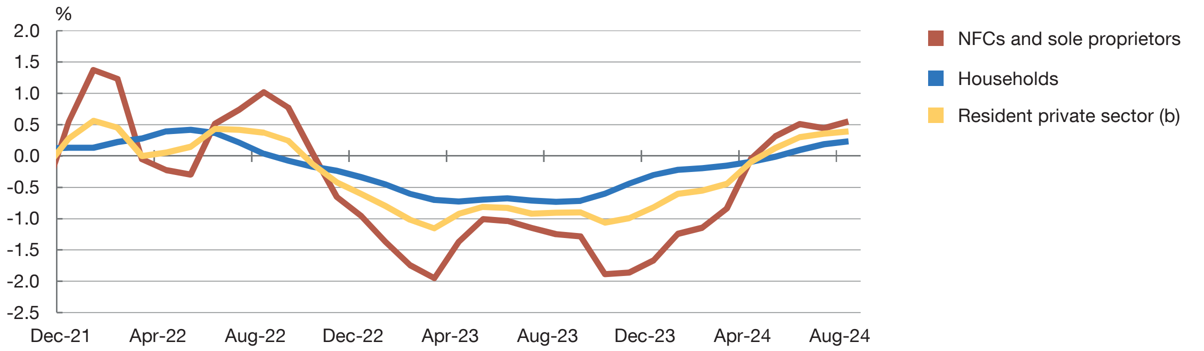
The non-performing loan (NPL) ratio for loans to the resident private sector in Spain held steady in the 12 months to June 2024. Indeed, the ratio stood at 3.3% in June 2024,

1 For example, see the information on outstanding loan amounts from euro area financial statements published in the Statistical Bulletin of the Banco de España.

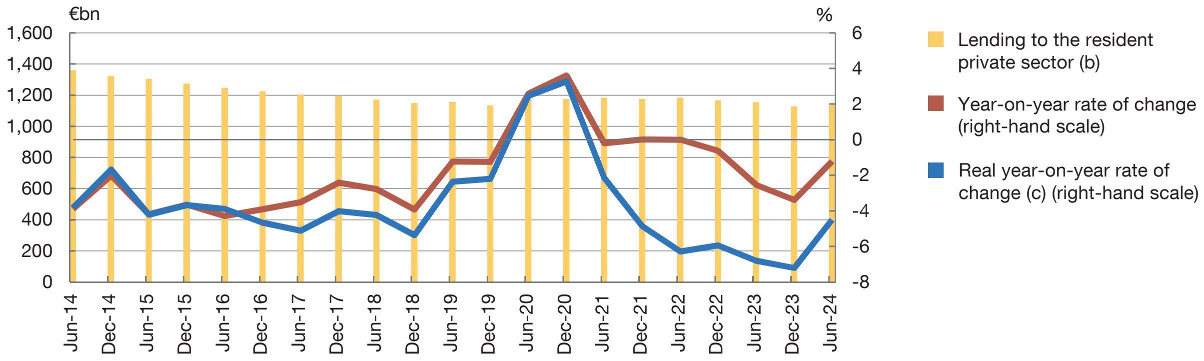
Chart 2.1

Lending to the Spanish resident private sector has grown in recent quarters, for both households and the non-financial corporate sector, which has helped to significantly mitigate its year-on-year fall

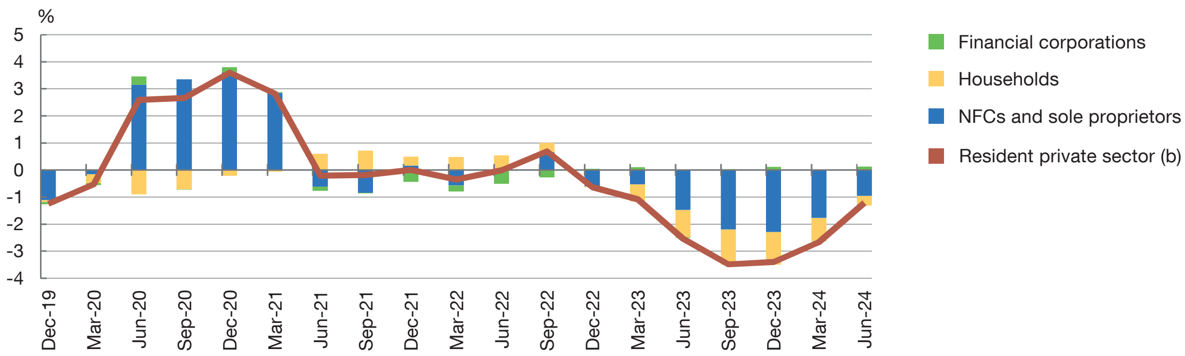
2.1.a Indicator of change in lending to the resident private sector (a). Business in Spain. ID



2.1.b Volume of lending to the resident private sector and rate of change. Business in Spain. ID



2.1.c Contributions to the year-on-year rate of change in lending to the resident private sector, by sector. Business in Spain. ID



SOURCE: Banco de España.

a This monthly indicator shows the quarter-on-quarter rate of change of the three-month moving average of the seasonally adjusted lending.
b The resident private sector includes households, NFCs and sole proprietors, and financial corporations.
c The time series of the real change in credit is obtained by taking into account its composition, deflating the portion of lending to households (not for business purposes) by the consumer price index and all other lending (to NFCs, financial corporations and sole proprietors) by the GDP deflator.

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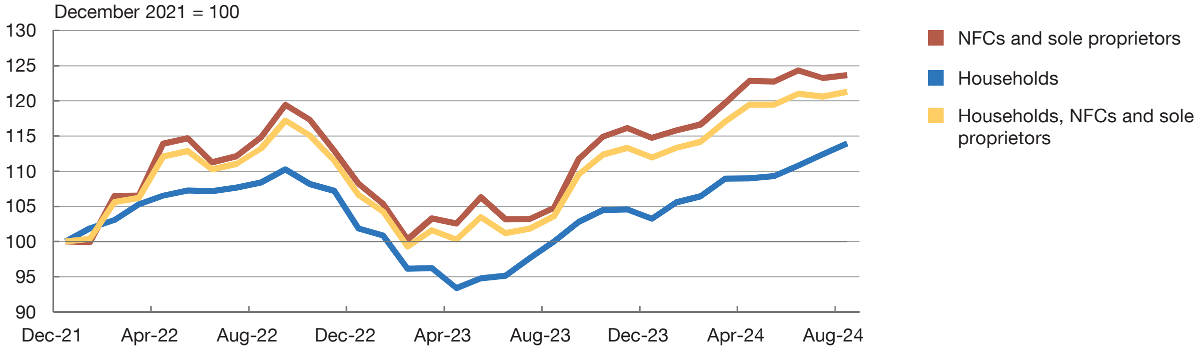
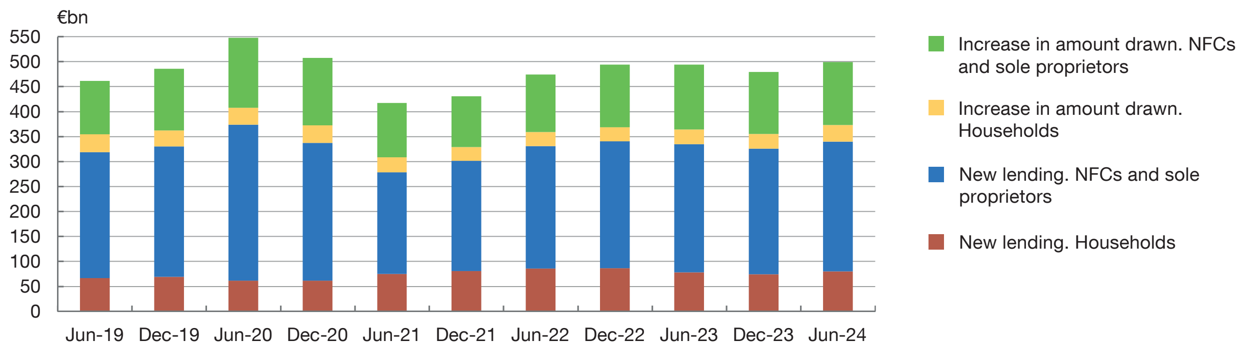
Chart 2.2

New lending to the Spanish private non-financial sector has shown strong momentum in recent quarters, but its 12-month cumulative volume showed moderate year-on-year growth to June 2024, as it still reflects the contraction of 2023 Q2

2.2.a Indicator of change in new lending. Business in Spain. ID (a) (b)



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



SOURCE: Banco de España.

a Excluding financial corporations.
b This monthly indicator shows the quarter-on-quarter rate of change of the three-month moving average of the seasonally adjusted volume of new lending.

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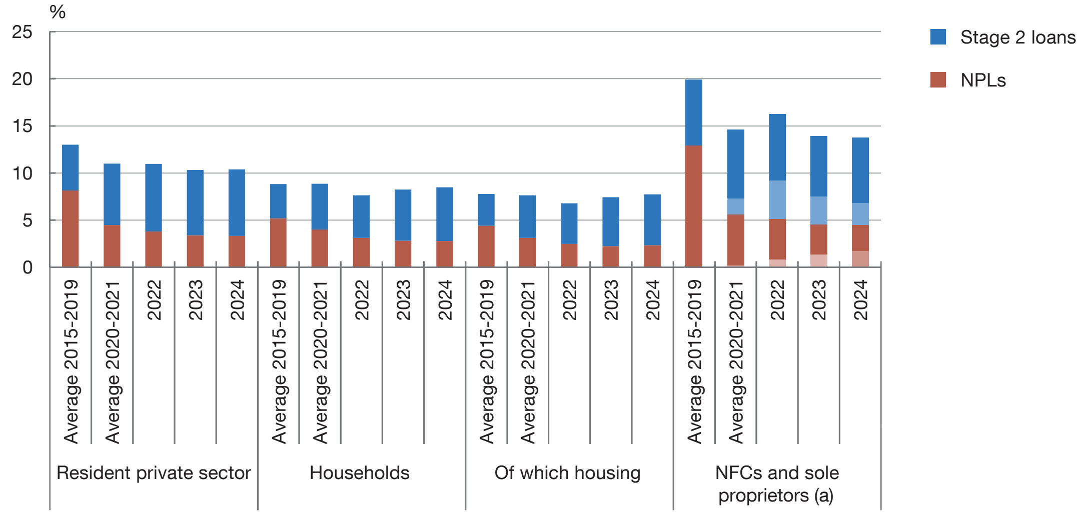
only 0.1 pp below its level one year earlier (see Chart 2.3.a). The NPL ratio stopped decreasing in early 2023, to stabilise at around its present level. This change has been observed in lending to both NFCs and sole proprietors and households.

In loans to NFCs and sole proprietors, the NPL ratio stood at 4.5% at the end of 2024 H1, with no appreciable year-on-year change. This portfolio's NPL ratio dropped by 4.1% year-on-year in June 2024, a rate of decline 4.7 pp lower than in December 2023 (see Chart 2.3.b). The drop in NPLs was similar to the contraction in the portfolio's overall size. This explains the stability of the ratio, which fell by just 0.1 pp in 2024 H1 (see Chart 2.3.a).

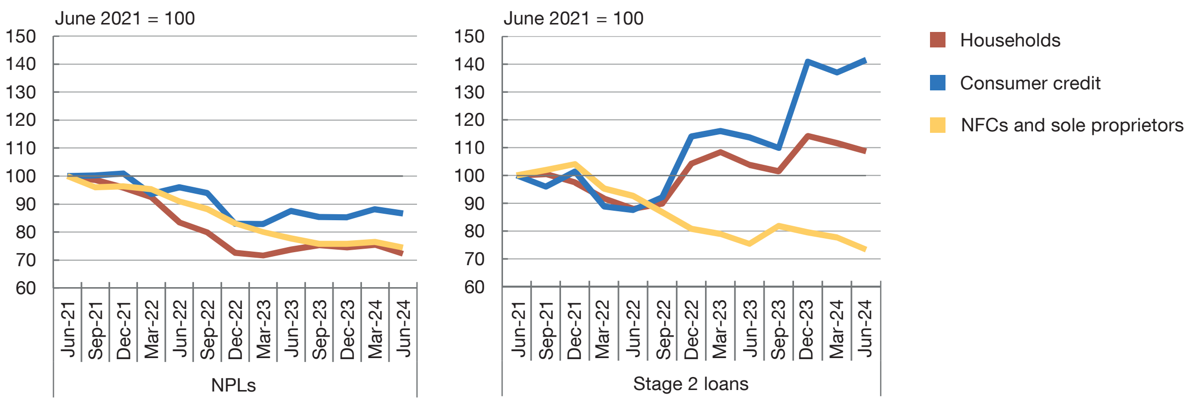
Similarly, the NPL ratio for household loans stood at 2.8% in June 2024, similar to its level one year prior. There was a year-on-year fall of 2% in the volume of NPLs in this sector at the end of 2024 H1, compared with the rise of 2.7% recorded in December 2023 (see Chart 2.3.b).

Chart 2.3
The credit quality of loans to the resident private sector in Spain remained stable in 2024 H1

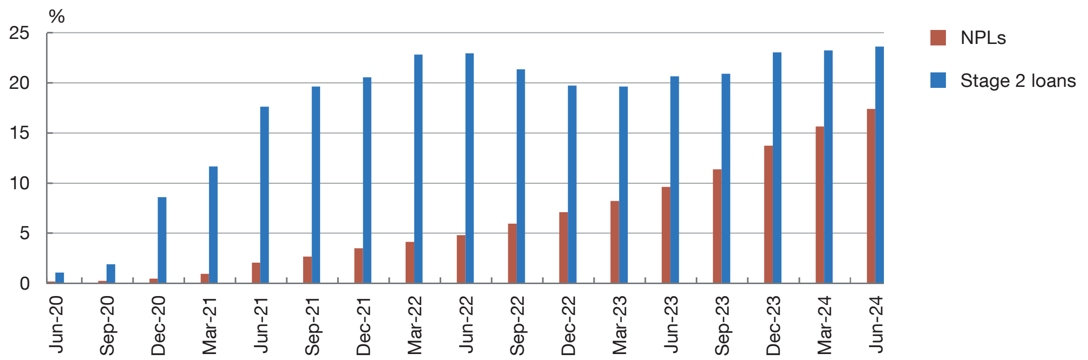
2.3.a Share of NPLs and Stage 2 loans. At June of each year. Business in Spain. ID



2.3.b Volume of NPLs (left-hand panel) and Stage 2 loans (right-hand panel). Business in Spain. ID



2.3.c NPL and Stage 2 ratios of ICO-backed loans. Business in Spain. ID



SOURCE: Banco de España.

a Lighter colours show the contribution to the ratio of ICO-backed loans to NFCs and sole proprietors.

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That fall was enough to offset the decline in the portfolio overall and cut its NPL ratio very slightly, owing to both lending for house purchase and other lending to households (see Chart 2.3.a).

The ratio of Stage 2 private sector loans saw a year-on-year increase of 0.1 pp to stand at 7% in June 2024, largely owing to developments in the lending to households segment. Stage 2 loans grew by 0.5% year-on-year in June 2024, compared with the 3.2% rise seen in December 2023. This change was characterised by a larger decline in such loans in the corporate sectors (by 2.9% year-on-year, versus 1.6% in December 2023) and the 4.7% increase in the household segment, down from 9.5% in December 2023. The year-on-year growth of 24.6% in consumer loans classified as Stage 2 is noteworthy, a level similar to that recorded in December 2023 (see Chart 2.3.b).

The NPL and Stage 2 ratios of loans backed by the Official Credit Institute (ICO-backed loans) loans rose to June 2024, helped by the decline in this portfolio's size. The volume of this type of lending fell by 30.5% in the 12 months to June 2024, to stand at €47 billion. The NPL ratio climbed by 7.8 pp to 17.4% and the Stage 2 ratio was up 3 pp to 23.6% (see Chart 2.3.c).[2] Stage 2 loans fell by more than 20% against their June 2023 level, while NPLs increased by 25.7%. The sum of NPLs and Stage 2 loans in this portfolio peaked at €23.9 billion in June 2022. It then gradually declined to June 2024, to stand at €20.6 billion. In this period, there was a reduction in Stage 2 loans, with many being reclassified as NPLs.

Amendments to the terms and conditions of loans to households grew slightly. Of the stock of loans to households in June 2023, 1.6% was refinanced, restructured, renegotiated or rolled over[3] between July 2023 and June 2024 (see Chart 2.4.a). This percentage is 0.1 pp above that observed between January 2022 and December 2023. This rise affects both transactions with borrowers that show some sign of financial difficulty (refinancing and restructuring) and those that do not (renegotiations and roll-overs).

The flow of transactions amending the terms and conditions on loans to the non-financial corporate sector has also climbed somewhat. In June 2024, these transactions accounted for 10.9% of the portfolio balance a year earlier, compared with 10.3% in December 2023 (see Chart 2.4.b). In terms of changes to terms and conditions for borrowers showing some sign of financial difficulty, the figure stood at 0.6% in this period, the same as in December 2023, but above the 0.5% recorded in June 2023. In any case, this share is substantially less than the 0.9% and 1.9% of June 2022 and June 2021, respectively.

Amendments to loan terms and conditions must continue to be monitored for preventive reasons. Their climb remains limited for both loans to households and loans to NFCs, but any larger increase could constitute a leading indicator of credit impairment.

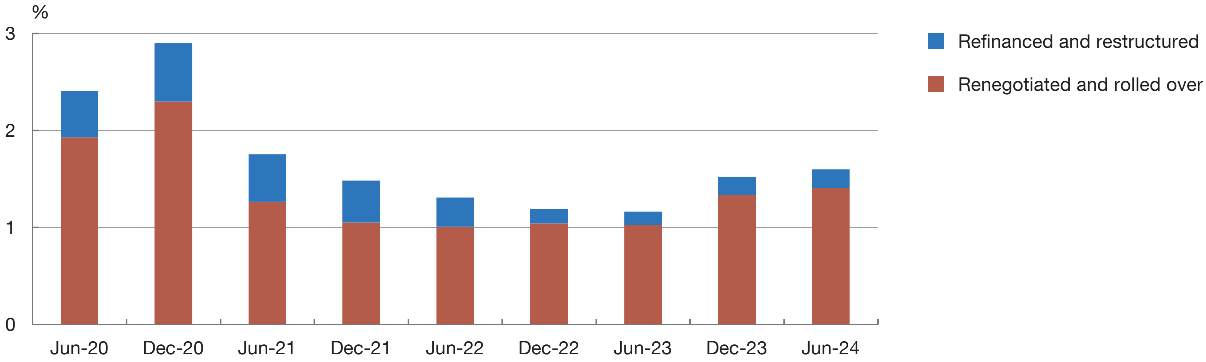
2 It should be noted that this portfolio is closed (no new loans are being extended), so any drop in the exposure necessarily drives up the NPL and Stage 2 ratios. For example, had the denominator of the NPL and Stage 2 ratios remained unchanged since June 2023, they would have been 12.1% and 16.4%, respectively.

3 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.

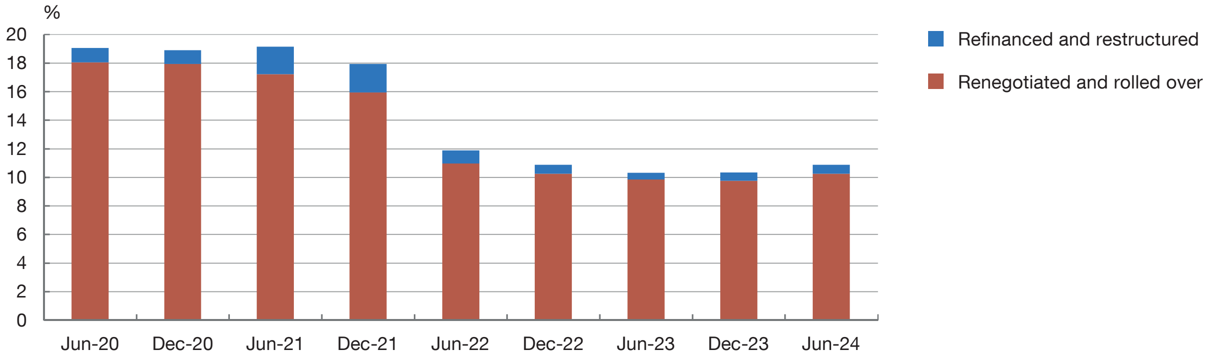
Chart 2.4

Amendments to loan terms and conditions up to June rose among households and, more moderately, in the non-financial corporate segment

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



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



SOURCE: Banco de España.

a The cumulative 12-month flow is calculated as the sum of the monthly flows from July to June, expressed as a percentage of the portfolio in June of the previous year, or from January to December, expressed as a percentage of the portfolio in December of the previous year.

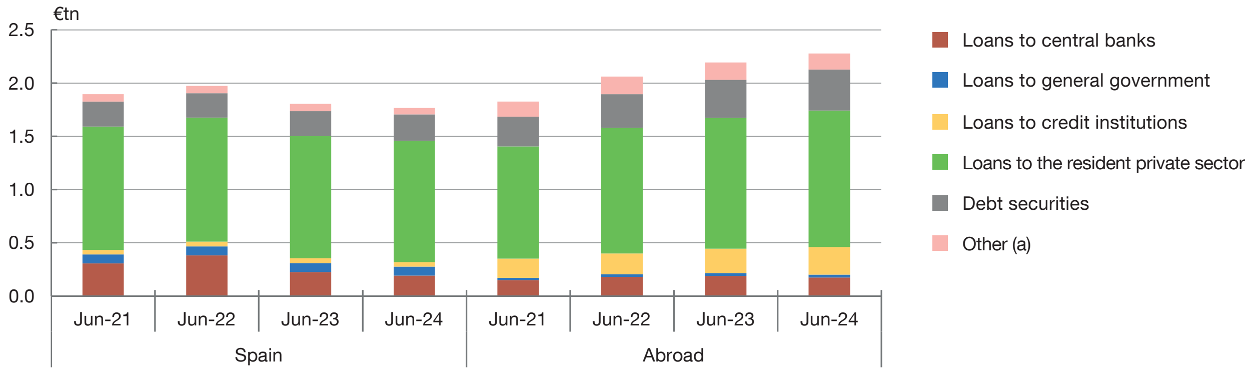
Financial assets in the consolidated business

The share of foreign business has seen sustained growth in recent years among Spanish deposit institutions as a whole, although it moderated in 2024 H1. Financial assets abroad accounted for 56.4% of total consolidated assets at the end of 2024 H1, with a year-on-year increase of 3.9%, 2.3 pp below the figure in December 2023. Credit to the resident private sector in countries other than Spain accounted for 56.3% of total financial assets in business abroad in June 2024, having risen by 4.3% over the previous year, compared with a year-on-year rate of 3.1% in December 2023. Fixed income abroad accounted for 16.9% of total financial assets in business abroad in June 2024 and showed a year-on-year rise of 7.4% in that month, 5.9 pp less than in December 2023 (see Chart 2.5.a).

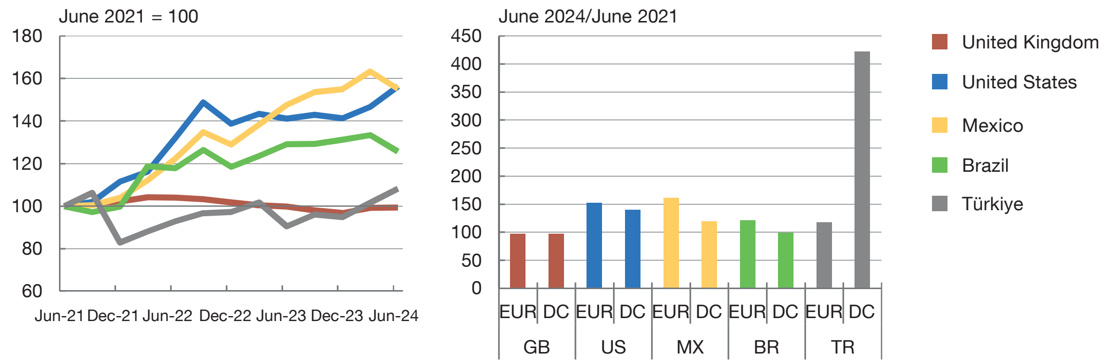
Developments in credit to the resident private sector in countries other than Spain in 2024 H1 were mixed across jurisdictions. In particular, there were notable year-on-year

Chart 2.5
The share of financial assets in business abroad continued to rise in 2024 H1

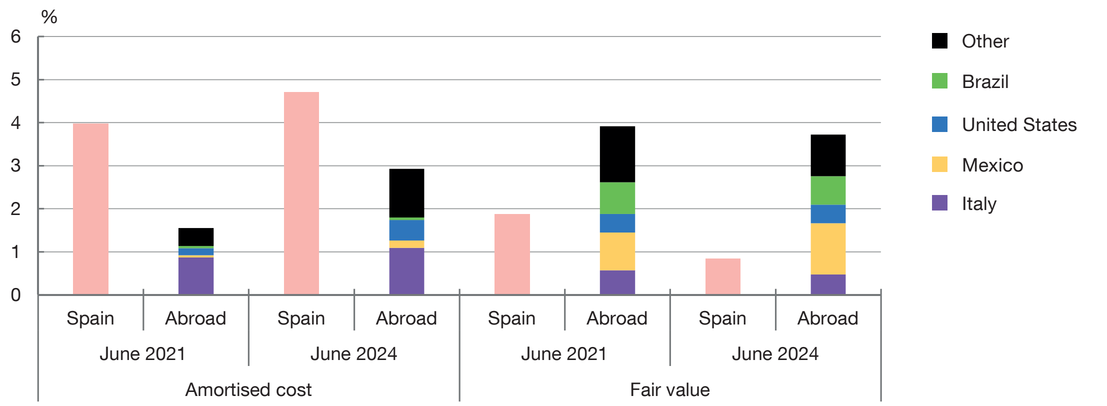
2.5.a Financial assets in Spain and abroad, by asset type. Consolidated data



2.5.b Total lending to the resident private sector in euro (left-hand panel) and domestic currency-denominated loans adjusted for the exchange rate against the euro and in the domestic currency (right-hand panel) (b). Consolidated data



2.5.c General government debt securities by portfolio and country, as a share of total assets. Consolidated data



SOURCE: Banco de España.

a "Other" comprises cash balances, derivatives and equity instruments.
b In the right-hand panel, for each counterparty country, the index of the change in activity is shown using its domestic currency valued in euro (EUR) and its domestic currency (DC). In the latter case, the effects of changes in the exchange rate against the euro are excluded.

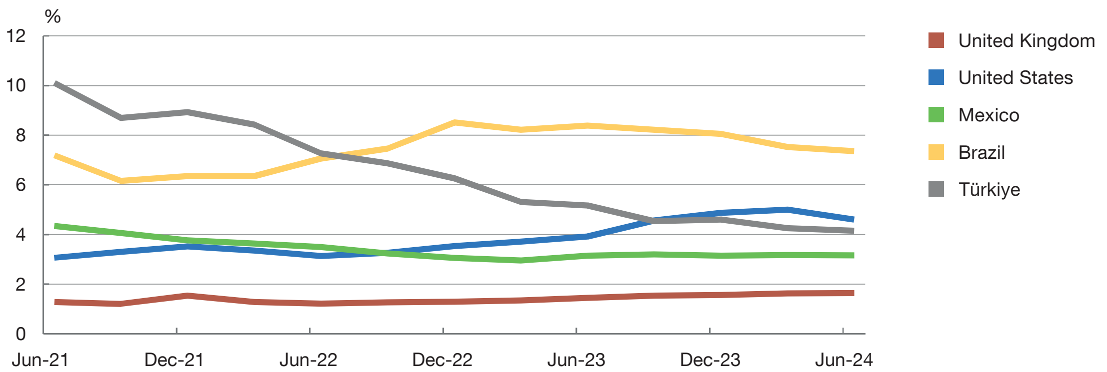
growth rates recorded in Türkiye (19.7%, 22 pp up on December 2023) the United States (10.8%, 9 pp up on December) and Mexico (5.1%, 15 pp down). In the United Kingdom, there was a 0.5% fall in lending, compared with a 5% drop in December 2023. Since June 2021, the minor appreciation of the US, Brazilian and Mexican currencies has driven growth in exposures in these countries. In Türkiye, however, strong domestic growth was hampered by the depreciating lira in a strongly inflationary environment (see Chart 2.5.b).

The share of sovereign bonds held at amortised cost in Spanish deposit institutions' consolidated assets has risen in recent years. Between June 2021 and June 2024, this share grew by 1.4 pp to 2.9% for foreign government holdings, while it rose more slowly, by 0.7 pp to 4.7%, for holdings of securities issued by Spain's general government (see Chart 2.5.c). In contrast, the share of holdings at fair value has fallen for both foreign general government securities (by 0.2 pp to 3.7%) and, more sharply, Spanish general government securities (by 1 pp to 0.8%). Overall, the share of general government fixed income holdings climbed by 0.9 pp in this period, to 12.1%, although it fell by 0.3 pp to 5.5% in the case of those issued by Spanish general government. This overall increase and the shift towards a portfolio held at amortised cost are consistent with an environment of rising interest rates, with this asset type seeing relatively moderate movements.

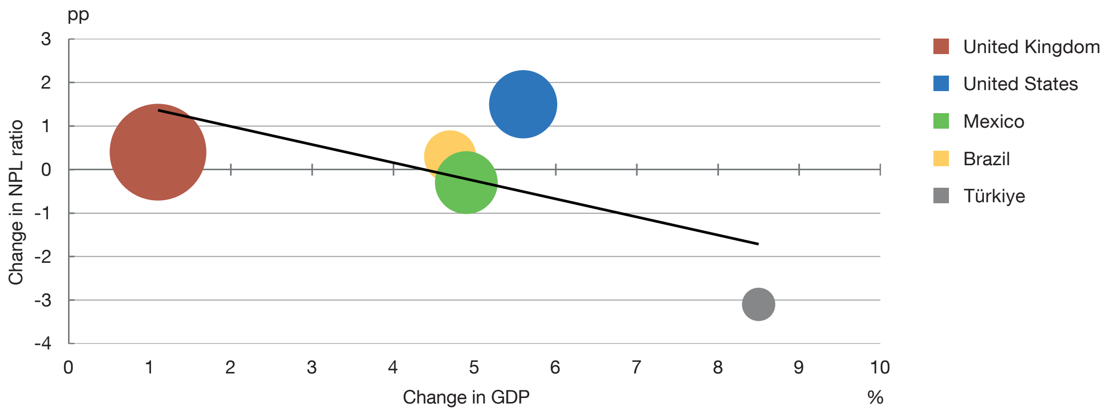
Chart 2.6

In the last 12 months, NPL ratios have declined notably in Brazil and Türkiye and risen markedly in the United States

2.6.a NPL ratio in the main countries of interest for the Spanish banking sector (a)



2.6.b Cumulative change in GDP and the NPL ratio (a) between June 2022 and 2024, by country (b)



SOURCE: Banco de España.

a Data on portfolios of loans to the resident private sector of Spanish deposit institutions in countries where they conduct significant international business.
b The size of each circle denotes the significance of each country in international business, in terms of loans granted by Spanish banks.

The credit quality of foreign loans showed no major changes in the 12 months to June. NPL ratios in the main foreign jurisdictions in which Spanish deposit institutions operate tended to converge in this period. The NPL ratios in Türkiye and Brazil fell by 1 pp between June 2023 and 2024 to 4.2% and 7.4%, respectively, while in the United States it rose by 0.7 pp to 4.6% and in the United Kingdom from 1.4% to 1.6% (see Chart 2.6.a). Between June 2022 and June 2024, there was a negative relationship between a country's GDP growth and its NPL ratio, in line with expectations (see Chart 2.6.b).

Liquidity and financing conditions

Money market activity has continued to intensify in 2024, fuelled by the normalisation of monetary policy. The return to a positive interest rate environment has made these markets more attractive. In the same vein, the reduction in the Eurosystem's balance sheet and excess liquidity has motivated some deposit institutions to seek alternatives to monetary policy loans as sources of funding. In the secured segment, the activity volume has increased for all maturities, and average interest rates are within similar ranges across the board (see Chart 2.7.a).

The spread between the secured money market rate (repos) and the deposit facility rate (DFR) has narrowed since end-2022. First, the increase in collateral availability has been a key development in the repo market and is linked to the decrease in central bank holdings under the purchase programmes and to higher sovereign debt issuance. This greater availability has put upward pressure on the repo rate[4] and narrowed the repo-DFR spread (in absolute value). Second, the shift in monetary policy expectations towards an interest rate cut could have curtailed demand for collateral, thus compressing the repo-DFR spread (in absolute value).[5] Lastly, deposit institutions' greater need for funding or liquidity (as observed in the higher volume of activity) has also contributed to increasing the repo rate and, in consequence, narrowing the repo-DFR spread.

The debt issuance costs of Spanish banks have decreased in 2024 to date. The shift in monetary policy rate expectations, which point to a more accommodative stance, helps explain the downward movement in wholesale funding costs. Spanish banks have benefited more than other euro area banks from the lower costs of all instruments in 2024 (see Chart 2.8.a).

The lower interest rates have enabled the Spanish banking sector to issue a greater volume of debt so far in 2024 than in 2023 as a whole. Subordinated debt issuance held at the same pace for both Additional Tier 1 (AT1) and Tier 2 eligible instruments, especially in the first part of the year, although it was concentrated among listed banks. Moreover, there was

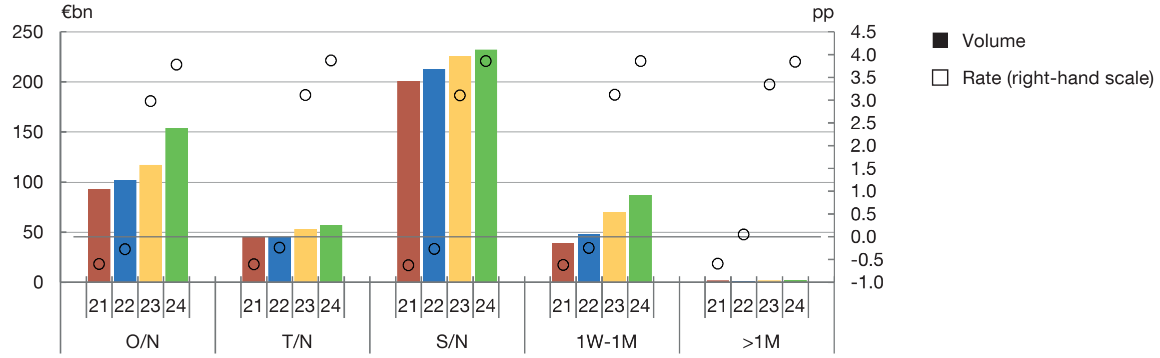
4 In 2022, when the repo-DFR spread widened significantly, the main objective for conducting repo transactions was to obtain collateral. When a participant seeks collateral in exchange for liquidity, an increase (decrease) in demand for collateral pushes rates downwards (upwards).

5 See Claudio Vela and Alicia Aguilar. (2024). "The impact of monetary policy normalisation on secured money markets". *Economic Bulletin* – Banco de España, 2024/Q1, 04. This article shows how the rise in demand for collateral resulting from the increased appetite for short positions in a context of rate hikes shifted the repo-DFR spread towards more negative values. However, this trend has reversed since 2023.

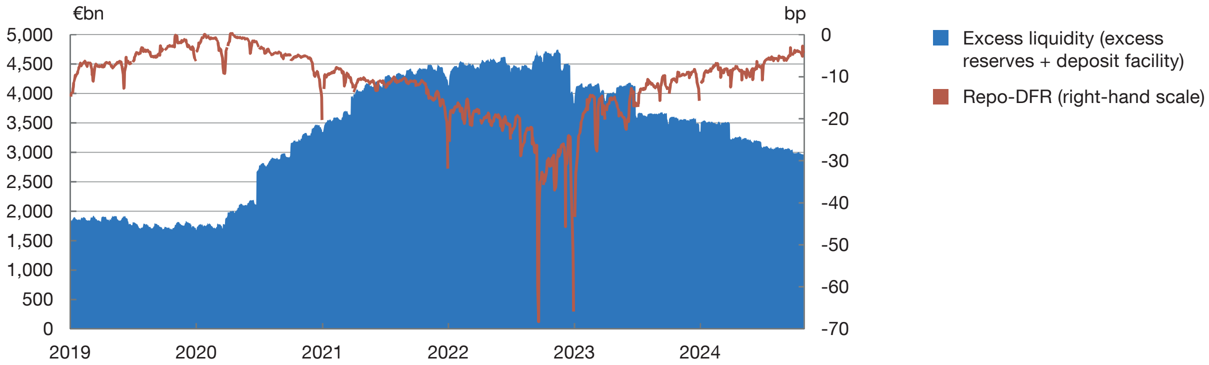
Chart 2.7

The monetary policy stance has increased interbank trading volumes in the secured segment for all maturities, while interest rates in this segment have drawn close to the DFR

2.7.a Volumes and interest rates in the secured money market (daily average), by maturity (a)



2.7.b Repo-DFR spread and excess liquidity (b)



SOURCE: MMSR.

a The chart depicts the average daily volume of transactions in the secured segment, where institutions that report to Money Market Statistical Reporting (MMSR) obtain financing. All sectors of the economy (except households) are considered as counterparties. Average rate in 2024 includes transactions up to September. Transactions that are settled on the trade date are called overnight or O/N, and those settled a day after are tomorrow-next or T/N. Finally, spot-next or S/N refers to transactions settled two days after the trade date. For the three categories, the maturity of the transaction is one day.

b The repo-DFR is defined as the volume-weighted average rate for fixed-rate transactions collateralised by government debt, based on borrowing transactions by MMSR-reporting deposit institutions. These include overnight or O/N, tomorrow-next or T/N and spot-next or S/N transactions. Only transactions with a minimum volume of €1 million are included. The DFR is the interest rate (remuneration) applicable to overnight deposits made by Eurosystem monetary policy counterparties.

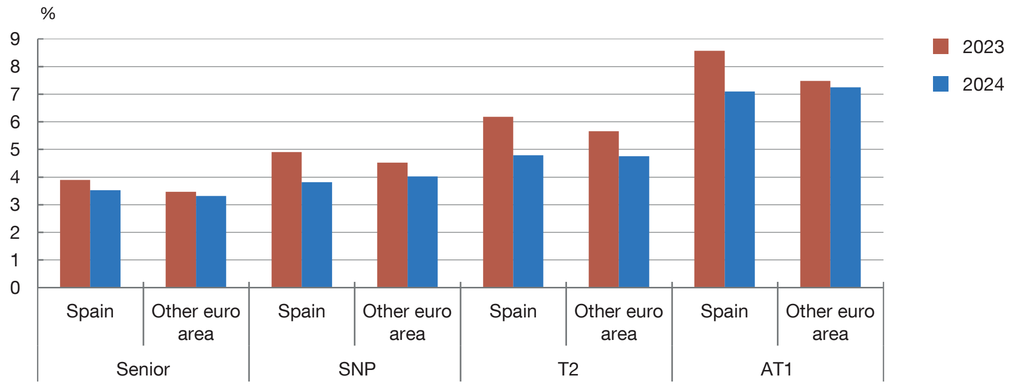
an increase in the volume of senior non-preferred (SNP) debt issuance (see Chart 2.8.b), with smaller banks participating, albeit at a slightly higher cost than other Spanish institutions. Lastly, the share of (secured and unsecured) senior issues in total issuance fell compared to the prior year, when they were driven by the need to replace some of the reduction in funding obtained through monetary policy loans (see Chart 2.8.b). Institutions are incentivised - albeit to differing degrees depending on their specific characteristics - to issue such debt (except in the case of secured senior debt), in order to comply with resolution requirements.

The average cost of bank liabilities at the consolidated level continued to climb in 2024 H1, exceeding 3%. This represented an increase of 77 basis points (bp) from the 2.3% recorded in June 2023. The interest expense on non-financial private sector deposits rose by 57.4% year-on-year, accounting for 63% of the total increase in funding costs. Although their unit remuneration

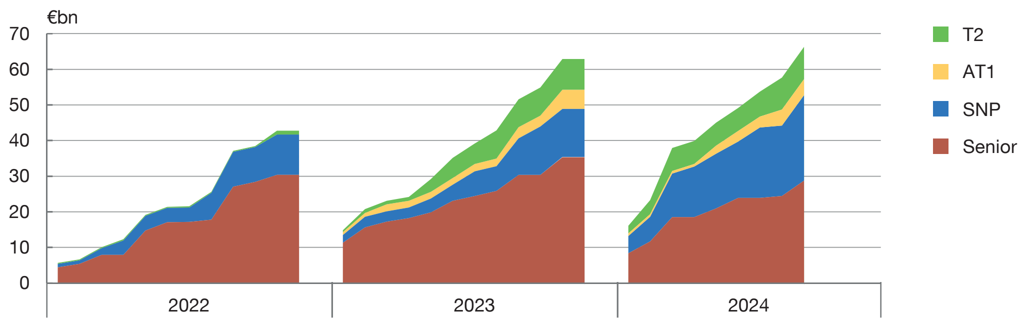
Chart 2.8

Against a backdrop of easing wholesale funding costs, Spanish banks issued a greater volume of debt in the first nine months of 2024 than in 2023 as a whole

2.8.a Average costs on the primary market. Euro area banks (a)



2.8.b Volume (in year) on the primary market. Spanish banks (b)



SOURCES: Dealogic and Banco de España.

a Primary market issuance costs for euro-denominated bonds are calculated as the volume-weighted average in each year. “Other euro area” includes banks in France, Italy, Germany and the Netherlands. Bonds issued up to September 2023 and 2024 are considered. “Senior” comprises unsecured and secured issuances, including covered bonds. Latest data: September 2024.

b The chart depicts the cumulative monthly issuance volume over the course of each year. “Senior” comprises unsecured and secured issuances, including covered bonds. Latest data: September 2024.

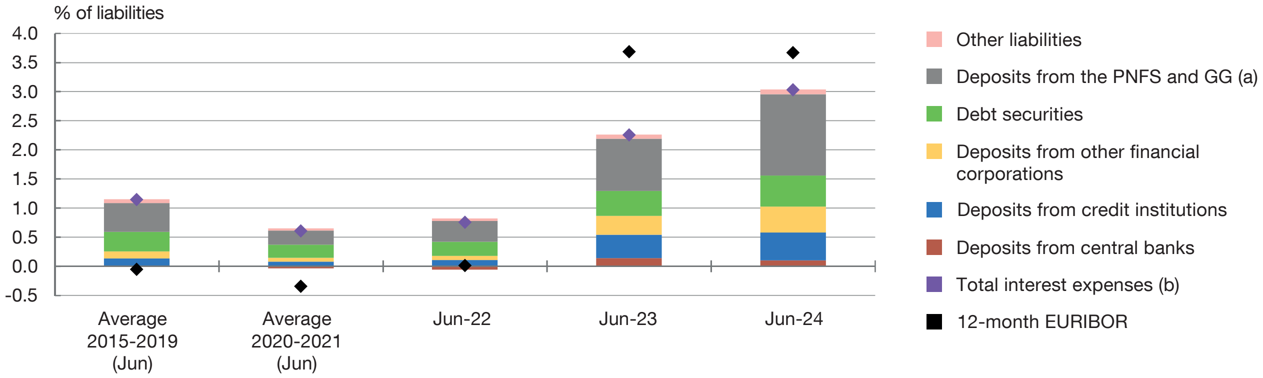
remained below that of other liabilities, these deposits make a large contribution to the average cost of bank liabilities as they are the main source of bank funding. The cost of funding from credit institutions, other financial corporations and bank debt also increased markedly in year-on-year terms (18.8%, 39.3% and 28%, respectively), while the cost of deposits at central banks declined (-23.8%) owing to the lower volume of funds held (-49.4%) (see Chart 2.9.a).

The increase in the average cost of liabilities in 2024 H1 has significantly reduced its spread with reference interest rates. As a result of the swift hike in monetary policy rates in 2022 and 2023 and its slow initial pass-through to retail deposit rates, the average cost of banks’ liabilities stood significantly below market rates, with the difference with the 12-month EURIBOR reaching 143 bp in June 2023. In 2024 H1 average market rates held steady with 2023 H1 which, along with the marked increase in the cost of bank liabilities, significantly reduced this spread, to 64 bp (see Chart 2.9.a).

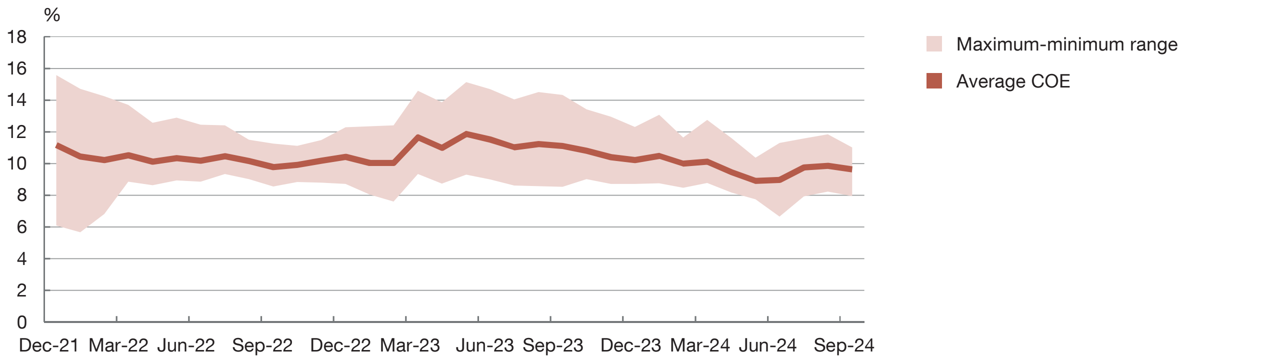
Chart 2.9

The average cost of bank liabilities continued to climb in 2024 H1, while the cost of equity has moderated both year-on-year and since the beginning of the year

2.9.a Interest expenses on funding. Data at consolidated level



2.9.b Cost of equity (c)



SOURCE: Banco de España.

a PNFS = private non-financial sector; GG = general government.
b Excludes expenses associated with interest rate hedge derivatives.
c The average value and the minimum-maximum range for the cost of equity are based on four dividend discount models (Ohlson and Juettner-Nauroth (2005), Ohlson and Juettner-Nauroth (2005) (simplified), Fuller-Hsia (1984) and Altavilla et al. (2021)). See L. Fernández Lafuerza and M. Melnychuk. (2024). "Revisiting the estimation of the cost of equity of euro area banks". *Financial Stability Review - Banco de España,* 46 (spring 2024), pp. 25-48.

Meanwhile, Spanish banks' cost of equity (COE) stands below its June 2023 level, but it picked up slightly in 2024 Q3. After following a downward path in 2023 H2 and 2024 H1, COE[6] rose somewhat in 2024 Q3, to stand within a range of 8%-11%, which is moderate by historical standards and below the level recorded in June 2023 (see Chart 2.9.b).

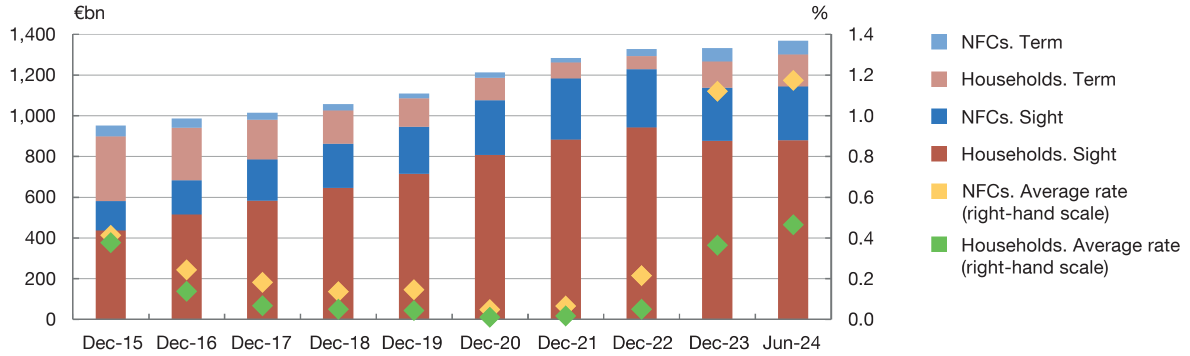
The average remuneration on household and NFC deposits in Spain continued to rise in 2024 H1, while funds have continued to flow from sight accounts to longer-term deposits. The total volume of non-financial private sector deposits in Spain rose by 5.2% year-on-year in

6 COE is unobservable and its estimation is subject to significant uncertainty. The value indicated is calculated as the weighted average estimate for the main Spanish listed banks, and shows the average value and the minimum-maximum range of four dividend discount models. See Luis Fernández Lafuerza and Mariya Melnychuk. (2024). "Revisiting the estimation of the cost of equity of euro area banks". *Financial Stability Review - Banco de España,* 46, pp. 25-48.

Chart 2.10

In 2024 H1 the average remuneration of household and NFC deposits continued to rise in Spain, while the balance of term deposits grew

2.10.a Outstanding deposits and average rate applied. Households and NFCs. Business in Spain



SOURCE: Banco de España.

June 2024. Households' and NFCs' term deposits increased by 65.5% in the period, to account for 16.4% of the total (1.8 pp more than in December 2023). In June 2024 the average remuneration of household and NFC deposits as a whole remained contained, standing at 0.47% and 1.17%, respectively, despite the growth compared with the previous year (see Chart 2.10.a).

Spanish banks' liquidity ratios held at comfortable levels, and no funding pressures were observed. In June 2024 the liquidity coverage ratio[7] (LCR) stood at 185.7%, a level very similar to that of December 2023 (186.3%) and well above the regulatory minimum required. The net stable funding ratio[8] (NSFR) – which measures banks' longer-term financing capacity – rose slightly, to 133.9% in June 2024 (from 133% six months earlier), thus increasing the headroom over the required minimum threshold of 100%. The loan-to-deposit ratio for the non-financial private sector continued to decline, standing at 97.3% and 79.9% at consolidated and individual level, respectively, thereby containing the risk of liquidity and funding stress.

2.1.2 Profitability and solvency

Profitability

The Spanish banking sector's consolidated profit in June 2024 increased by 22% compared with a year earlier, driven primarily by growth in net interest income. Thanks

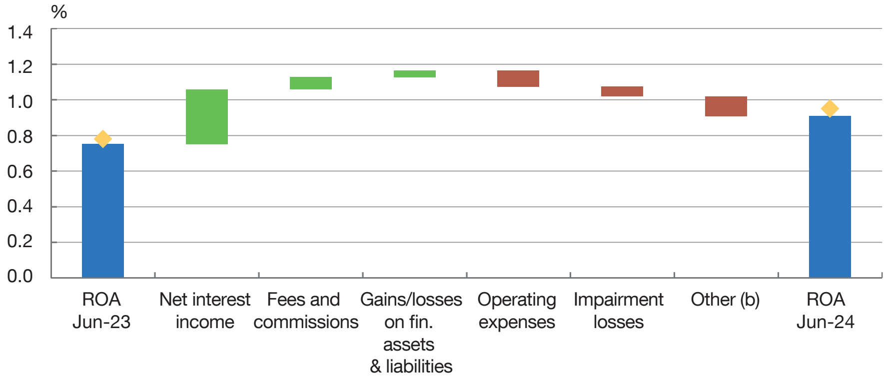
7 The LCR is defined as the ratio between a bank's unencumbered liquid assets and potential net liquidity outflows during a 30 calendar-day stress period. A level over 100% indicates that the bank holds sufficient liquid assets to cover potential liquidity outflows in a stress scenario.

8 The NSFR 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.

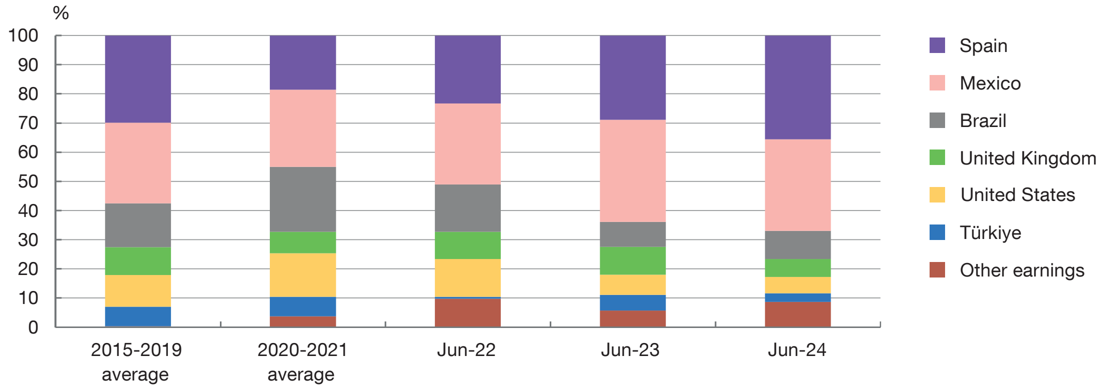
Chart 2.11

Consolidated profit grew 22% year-on-year in 2024 H1, driven by the higher net interest income, and business in Spain and Mexico was notably strong

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



2.11.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 reports.

a The red (green) colour of the bars denotes a negative (positive) contribution of the corresponding item to the change in consolidated profit at June 2024 compared with June 2023. The yellow diamonds denote the ROA excluding the impact of the temporary levy on the banking sector.

b Includes, among other items, the temporary levy on the banking sector mentioned in the previous note.

c The group of banks with significant international activity 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 "Other earnings" category includes earnings in other countries and those of the banks' corporate centres.

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to this improvement in net profit, the return on assets (ROA) rose from 0.75% in June 2023 to 0.91% (see Chart 2.11.a). Similarly, the return on equity (ROE) increased by more than 2 pp, to 13.9%, above the range of COE estimates. Without the impact of the extraordinary levy on banks applicable in both periods,[9] year-on-year growth in net profit would have been very similar (22.6%), ROA would have stood at 0.95% and ROE at 14.5%. The levy amounted to 0.11% of risk-weighted assets (RWAs) as of June 2024.

9 If the information provided by the Ministry of Finance in the June 2024 budget outturn (only available in Spanish) is extrapolated to the entire year, the levy payable in 2024 would amount to €1,687 million, 45% up on that paid in 2023 according to the information in the December 2023 budget outturn (only available in Spanish).

Profit performed unevenly across geographical areas (see Chart 2.11.b). In year-on-year terms to June, profit rose significantly in Spain and somewhat less so in Brazil and Mexico, but it declined in the United Kingdom and Türkiye and remained relatively stable in the United States. Considering a longer time frame, the share of Spain and Mexico in the aggregate profit of major institutions with an international presence has increased over the last five years.

Net interest income increased in 2024 H1 both at the consolidated level and in Spain, albeit less than in 2023 H1. The improvement in net interest income was mainly due to the marked price effect (see Chart 2.12.a) as a result of the lending-deposit spread being wider in 2024 H1 than in the same period a year earlier. The price effect could continue to diminish over the coming quarters if market expectations of interest rate cuts are borne out. The quantity effect was also positive, but it made a significantly smaller contribution to the increase in net interest income than the price effect at the consolidated level and had a minimal impact on business in Spain.

As regards business in Spain, the average rates on loans to the non-financial private sector reached their peak in 2024 H1, and have now started to decrease owing to the cut in key policy rates. Consistent with the projections based on the historical pattern,[10] given the fall in the 12-month EURIBOR since November 2023, average rates on loans to households for house purchase and to NFCs have started to decline. Since their high in 2024 H1, these rates have fallen by 16 bp and 14 bp, respectively, to stand at 3.5% and 4.3% in September 2024 (see Chart 2.12.b). It should also be noted that the peaks reached during the monetary policy tightening cycle were lower than expected based on past experience.

In recent months the average cost of NFC deposits in Spain has also started to decrease, albeit more moderately, while it has levelled off in the case of household deposits. The average cost of NFC deposits has fallen by 5 bp from its May peak, to stand at 1.2% in September 2024. Of this decrease, 86% was attributable to the lower interest rates on both sight and term deposits, while the remaining 14% was due to a composition effect driven by the higher relative weight of sight deposits, which offer lower remuneration (see Chart 2.12.c, right-hand panel). In the case of household deposits, the average cost appears to be reaching its peak, given the levelling-off observed in recent months (see Chart 2.12.c, left-hand panel). As with lending rates, deposit rates peaked below the level expected based on historical data.

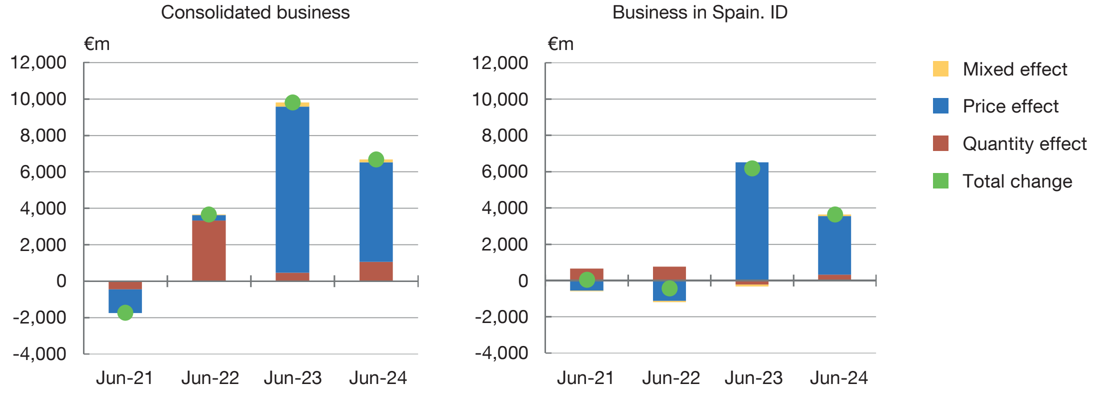
Net operating income rose by 17.3% in the 12 months to June 2024, driven by the growth in net interest income and other items, despite higher operating expenses. Other contributors to the increase in net operating income, in addition to the significant improvement in net interest income, were fee and commission income and gains on financial assets and liabilities, which rose year-on-year by nearly 10% and 32%, respectively, in June 2024 (see

10 The historical pattern is captured using a multivariate regression model that makes it possible to determine the expected path of interest rates based on changes in the 12-month EURIBOR and various macroeconomic variables.

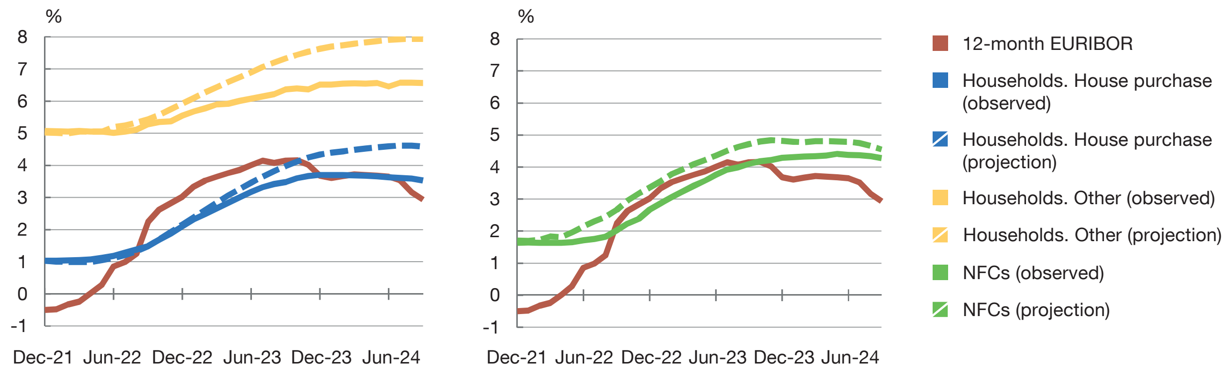
Chart 2.12

Net interest income continued climbing in year-on-year terms to June 2024, thanks mainly to the price effect, although this was not as strong as in 2023 due to the tailing off of the pass-through of interest rate hikes

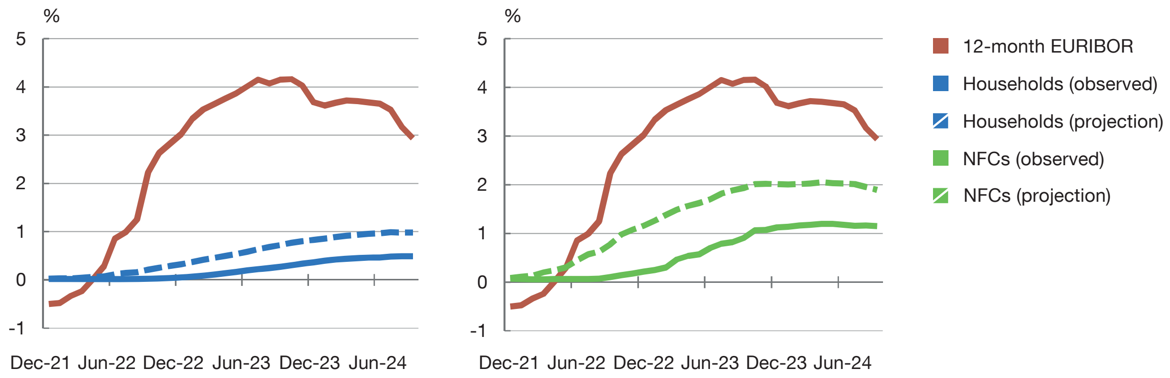
2.12.a Breakdown of the change in net interest income (a)



2.12.b Change in average interest rates on outstanding loan balances and in the 12-month EURIBOR (b). Business in Spain



2.12.c Change in average interest rates on outstanding deposits and in the 12-month EURIBOR (b). Business in Spain



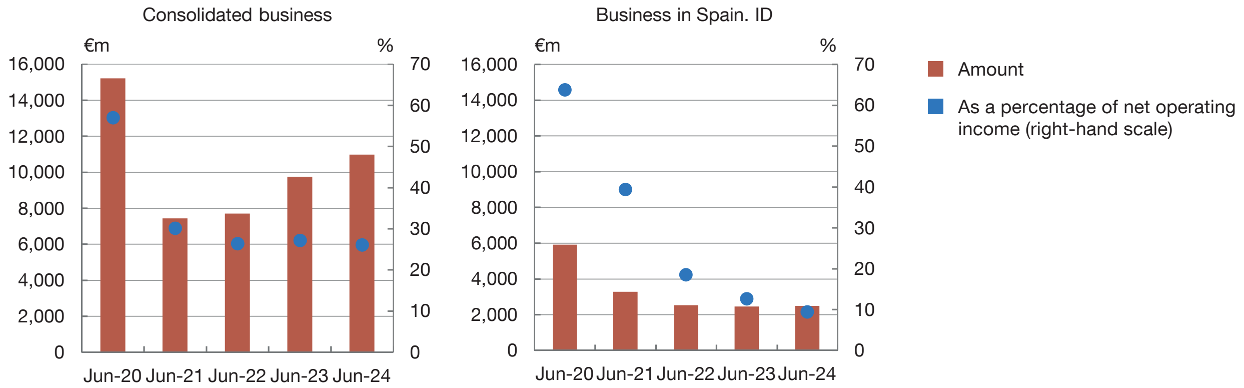
SOURCE: Banco de España.

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.

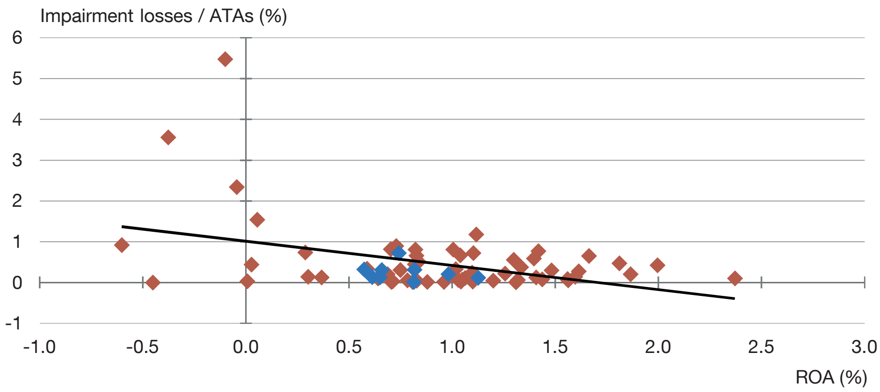
b Projections of bank loan and deposit interest rates are calculated using a multivariate structural SVAR model based on historical interest rate data reported to the ECB.

Chart 2.13
Although impairment losses increased year-on-year in the first half of 2024, they remained relatively stable as a share of net operating income

2.13.a Impairment losses



2.13.b Relationship between impairment losses and ROA. Consolidated data (a). June 2024



SOURCE: Banco de España.

a Significant institutions are shown in blue.

Annex 2). Conversely, operating expenses also increased (7.2% year-on-year), but their negative contribution was more than offset by the aforementioned improvements in the top line of the income statement.

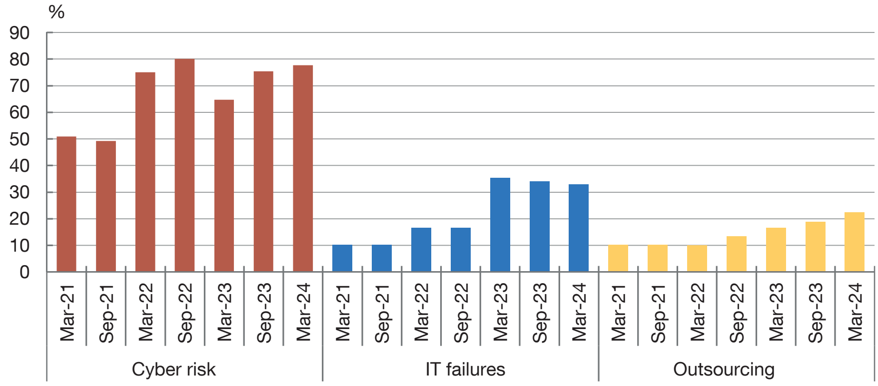
Impairment losses increased in 2024 H1, but their share in net operating income did not. Thus, they saw year-on-year growth both at the consolidated level (12.6%) and in Spain (1.5%). However, as a share of net operating income they remained stable at the consolidated level (close to 26%, see Chart 2.13.a) and fell by 3.2 pp in business in Spain (to 9.5%). Impairment losses (as a percentage of average total assets (ATAs)) were not a major factor in explaining the differences in ROA across institutions in the first half of the year, as the relationship between the two variables was weak (see Chart 2.13.b).

Among the drivers of operating costs, cyber risks remain a major concern for banks in Europe (see Chart 2.14.a). This concern, which is shared by the authorities, is justified by the

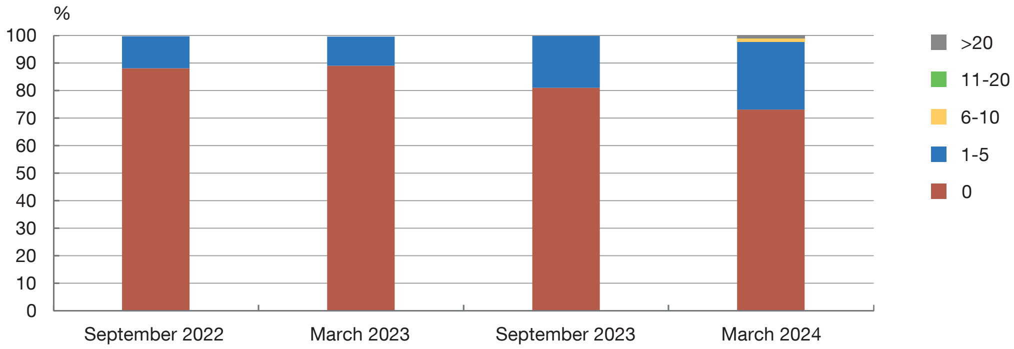
Chart 2.14

Cyber risks are a potentially significant source of operational costs, as illustrated by the growing number of successful cyber attacks with a major impact on European banks

2.14.a Technological drivers of operational risk perceived by banks in Europe (a)



2.14.b Proportion of European banks affected by successful cyber attacks with a significant technological impact (b)



SOURCE: EBA.

a The data reflect the frequency of various technological factors in banks' responses to a survey about the three main drivers of operational risk as seen by banks. The responses relating to non-technological drivers have been omitted in this chart.

b The figures reflect the proportion of banks by number of cyber security incidents with a potentially high adverse impact on the network and information systems supporting the critical functions of each affected bank. The number of incidents is based on participating banks' responses to the EBA's Risk Assessment Questionnaire for the previous six months. See EBA, Risk Assessment Report.

penetration of digital technology in the banking sector and the potential impact of the more serious incidents, whether malicious or otherwise, and is further exacerbated by the recent increase in serious incidents affecting European institutions (see Chart 2.14.b).

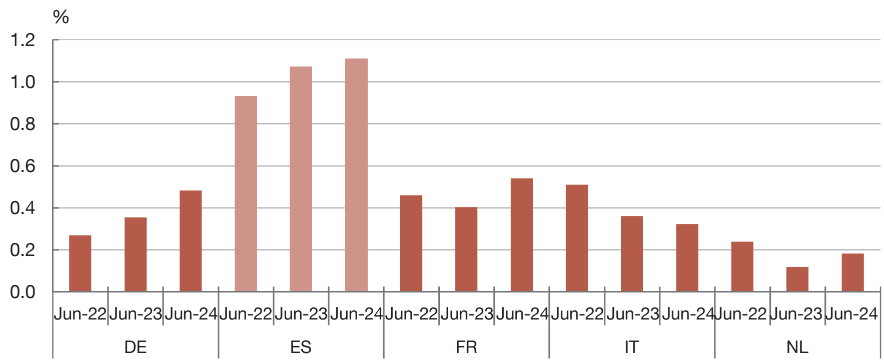
The cyber incidents that occurred in the period covered by this report were noteworthy, not because of their actual impact, but because of their characteristics. This is because, in addition to their operational impact, these incidents pose reputational risks and may threaten banks' turnover. The disruption to technological services caused across the world by a faulty update of a cyber security component from one of the leading global providers (CrowdStrike) in July highlighted the risk of incidents spreading across closely interconnected digital service environments with a high concentration of providers. The incident was short-lived, limiting its impact, but it illustrated the importance of vulnerabilities stemming from third-party services. Moreover, in the spring a Spanish significant bank's customer database was hacked. The stolen information lacked immediate transactional relevance, and this limited the direct impact of this incident.

European supervisors understand that it is essential for banks affected by a cyber incident to respond swiftly in order to contain its impact. Indeed, the Single Supervisory Mechanism (SSM) chose a cyber resilience test as the thematic stress test for 2024, in line with its priorities for the period 2024-2026. The stress test assessed how banks would respond to and recover from a severe but plausible cyber security incident that affected them individually. Overall, the stress test showed that banks have response and recovery frameworks in place, but important areas for improvement remain.[11] The results of the test will feed into the 2024 Supervisory Review and Evaluation Process (SREP) and have helped increase banks' awareness of the strengths and weaknesses of their cyber resilience frameworks.

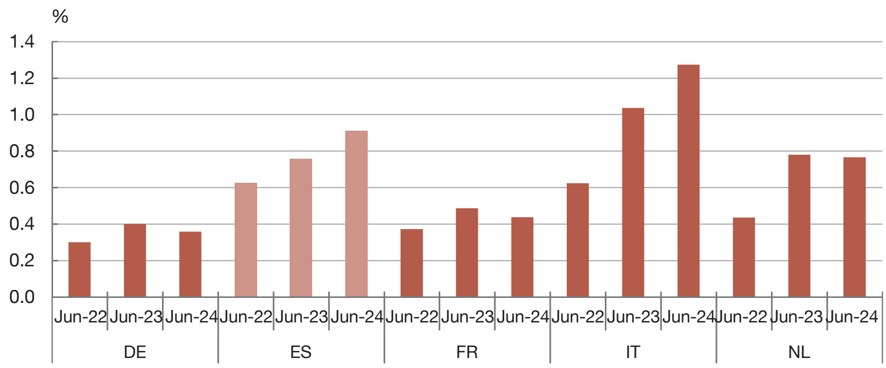
Chart 2.15

Spanish banks' profitability is one of the highest among the main European countries, despite a higher cost of risk in recent years

2.15.a European comparison of the cost of risk (a). Consolidated data. June 2022-2024



2.15.b European comparison of ROA. Consolidated data. June 2022-2024



SOURCE: EBA.

a Cost of risk is defined as provisions divided by gross lending.

11 See SSM press release.

In June 2024, despite its higher cost of risk in relative terms, the Spanish banking sector was the second most profitable among the main European countries. In recent years Spanish banks' cost of risk has been the highest among the main European countries (see Chart 2.15.a). Yet despite this, their ROA has been one of the highest, second only to that of Italy's banks (see Chart 2.15.b).[12] Moreover, while in Spain and Italy profitability has followed a rising trend, in the other major European countries profitability fell in 2024 H1 compared with the same period a year earlier, probably reflecting the different sensitivities of banks' business models in each country to key policy rate developments.

Solvency

The Common Equity Tier 1 (CET1) capital ratio stood at 13.3% in June 2024, up slightly from the same month a year earlier. This represented an increase of 15 bp, underpinned by a positive contribution from CET1 capital (the numerator of the ratio), which grew 4.5% year-on-year, offsetting the negative contribution of RWAs (the denominator of the ratio), which grew 3.3% year-on-year (see Chart 2.16.a). The growth in RWAs was the result of both an increase in assets (by 1.1%) and in their risk profile, as indicated by the 80 bp rise in RWA density over this period.

The CET1 ratio of the Spanish banking system remains below those of other large European economies. At end-June 2024 the CET1 ratio for Spain was still below the ratios of countries such as Germany, France, Italy and the Netherlands (see Chart 2.16.b, left-hand panel).[13] Spain's lower level is due to distinctive factors, such as the lesser use of internal models, which results in higher RWA density.

Spanish banks' leverage ratio is similar to that of banks in other major European countries. The Spanish banking system's leverage ratio stood at 5.5% in June 2024, a level slightly above that of France, similar to that of Germany and below that of Italy and the Netherlands (see Chart 2.16.b, right-hand panel).

The voluntary component of the Spanish banking system's CET1 capital ratio has held steady since the start of the monetary policy rate hiking cycle. In particular, voluntary CET1 capital stood at 3.43% of RWAs at June 2024, just 4 bp below its June 2023 level.[14] Also, the latest available data show that the figure for Spanish banks is 1.5 pp lower than the EU average (calculated using a sample of significant institutions, including Spanish ones). This gap in voluntary

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12 The difference between the ROE figure in Chart 2.15.b (0.93%) and the ROE level indicated at the start of this section and in Chart 2.11.a (0.91%) stems from the fact that the first figure relates to the sample of main banks used by the European Banking Authority (EBA) (which accounts for around 90% of total consolidated assets in the system), whereas the second relates to all the deposit institutions in the Spanish banking system.

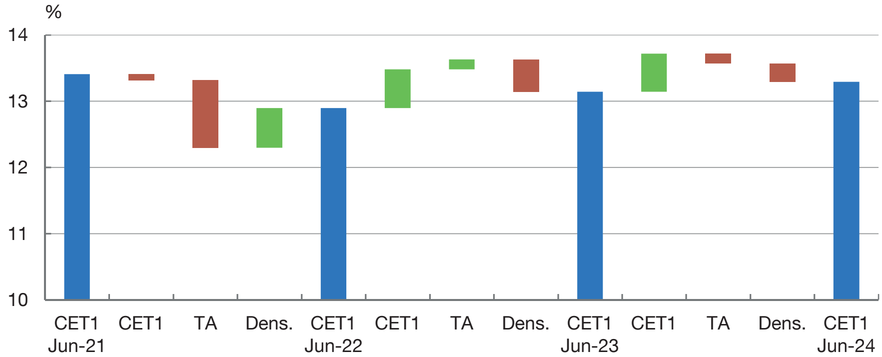
13 The Spanish banking system's CET1 ratio used in Chart 2.16.a differs from that used in Chart 2.16.b, as the latter figure (reported by the EBA) considers only the ten largest Spanish banks.

14 Voluntary capital is calculated as the CET1 ratio minus the minimum CET1 requirements, the combined buffer requirements and the Pillar 2 guidance.

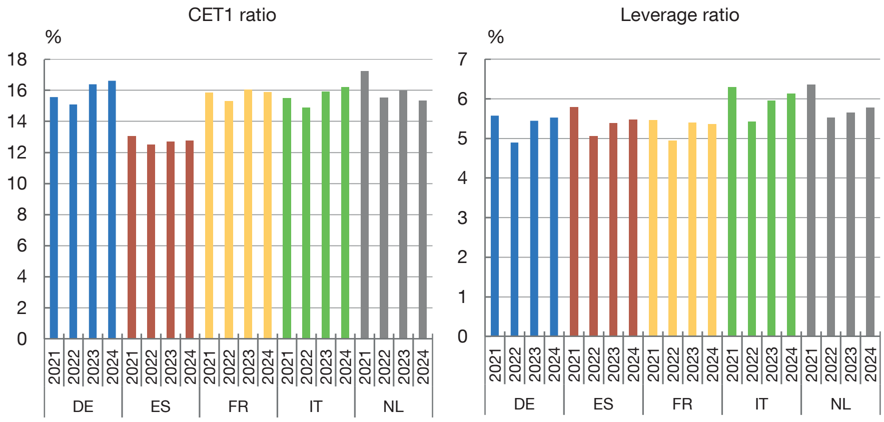
Chart 2.16

The Spanish banking system's CET1 ratio and voluntary capital buffer have held steady since June 2022, remaining below those of other European banks

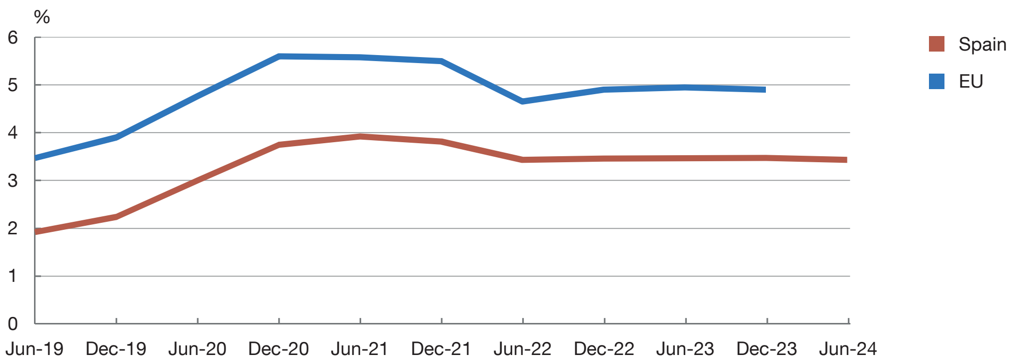
2.16.a Breakdown of the change in the CET1 ratio between 2021 and 2024 (a). Consolidated data



2.16.b European comparison of the CET1 ratio and the leverage ratio. Consolidated data as at June each year



2.16.c Voluntary capital component of the CET1 ratio (b). Consolidated data



SOURCES: EBA and Banco de España.

a The CET1 ratio 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 green (red) bars denote positive (negative) contributions from components.

b Voluntary capital is calculated as the CET1 ratio minus the minimum CET1 requirements, the combined buffer requirements and the Pillar 2 guidance. The figures for Spain are calculated for all deposit institutions at the consolidated level. The figures for the EU refer to a sample of banks reporting to the EBA.

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capital between Spanish banks and their EU peers accounts for approximately half of the total difference in their CET1 ratios, owing largely to Spanish banks' lower capital requirements.

2.2 Non-bank financial sector and systemic interconnections

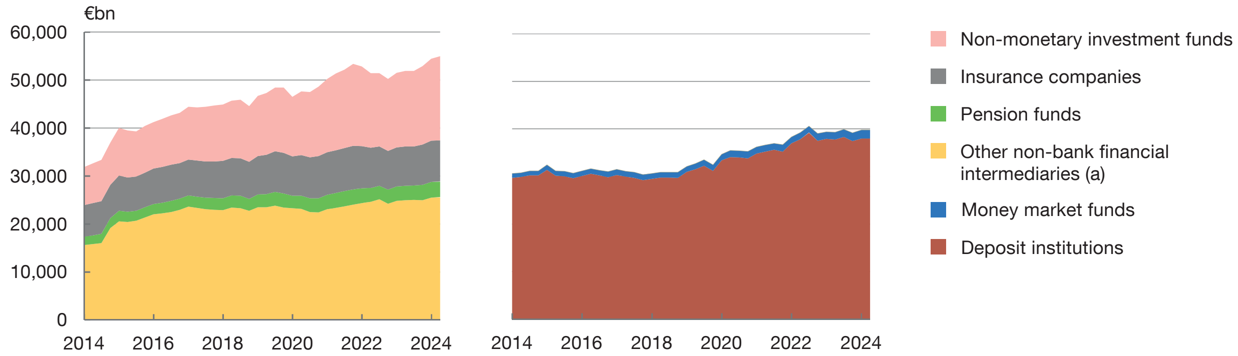
2.2.1 Non-bank financial sector

Overall non-bank financial sector developments

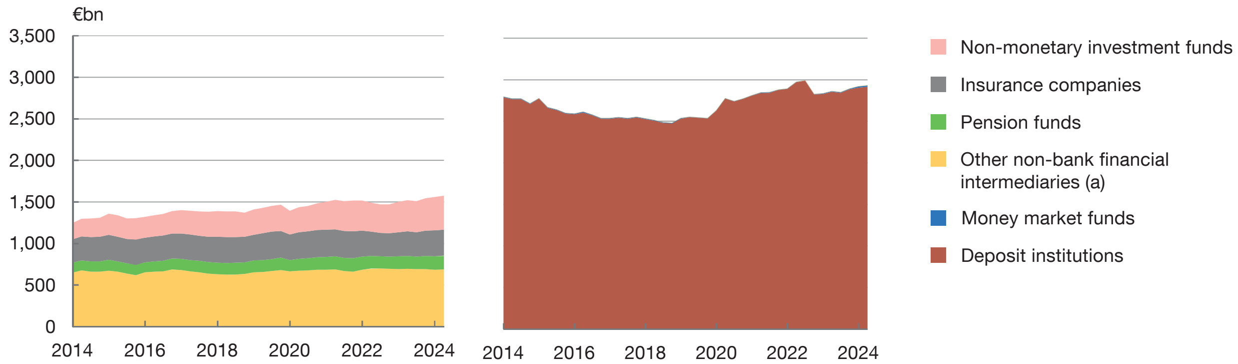
The total assets of the euro area non-bank financial (NBF) sector continued to grow in 2024 Q1, surpassing the volume reached before the decline in late 2022. This trend of rising asset volumes in this sector, which began in early 2023, gathered pace in 2023 Q4 and 2024 Q1 (see Chart 2.17). Although the Spanish NBF sector has seen similar growth in this

Chart 2.17
The euro area NBF sector's total assets grew in the first half of 2024, surpassing the volume reached before the decline in 2022

2.17.a Total assets of the different financial sectors in the euro area. Non-consolidated data



2.17.b Total assets of the different financial sectors in Spain. Non-consolidated data



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

a Other non-bank financial intermediaries include SLIs, venture capital companies, securities dealer companies, special-purpose vehicles, central counterparty clearing houses, real estate investment trusts, securities agencies, collective investment institution management companies, mutual guarantee societies, financial group head offices, appraisal companies, payment institutions, holding companies, special-purpose entities that issue securities and other specialised financial institutions. In Spain holding companies and special-purpose vehicles accounted for 52% and 24%, respectively, of the sector's total assets in 2023 Q4 (€638 billion).

period, it continues to account for a much lower share of the financial system than in the euro area overall (35% and 58% of total assets, respectively, in 2024 Q2).

In both the euro area and Spain, this growth in the NBF sector has been spearheaded by the investment fund sector. Investment funds' total assets increased by more than 11% in the euro area and over 10% in Spain between 2023 Q2 and 2024 Q2. This growth came hand-in-hand with a steady rise in investment flows over 2024 H1, continuing last year's trend.

Investment funds

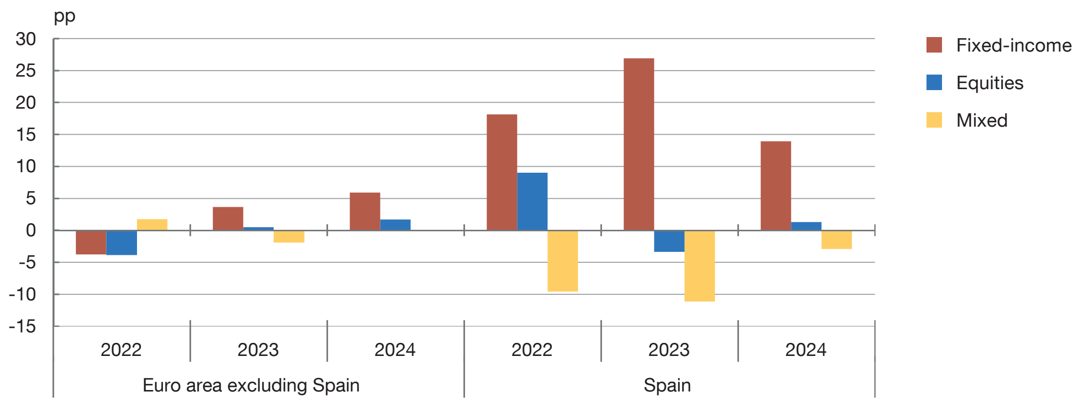
Net capital inflows to fixed income funds have increased in 2024. This rise occurred across all euro area countries, with Spain seeing the sharpest increase (see Chart 2.18.a). This could reflect these assets' still high yield to maturity, which in some cases has continued to exceed the return offered by bank deposits. Against this background, debt securities holdings continue to make up a higher share of the assets of funds domiciled in Spain than of those domiciled in the rest of the euro area (48% and 35%, respectively, in March 2024).

Capital flow developments have been more stable in the other fund categories, with a few exceptions. In particular, Spanish mixed funds experienced net outflows in the year as a whole, while conditions have been more stable for funds domiciled in other European countries. This could be due to flows shifting towards vehicles that invest more in the domestic bond market, as these securities offer higher yields to maturity in Spain than in other jurisdictions (for example, the yield on Spanish Treasury bonds is higher than that of the German equivalent).

Chart 2.18

Capital inflows to fixed-income funds remained strong throughout 2024, particularly in Spain

2.18.a Investment fund flows (a)



SOURCE: European Central Bank (Investment fund statistics).

a Accumulated change in net capital inflows or outflows of investment funds in each area and year (data is available up to August 2024). This change is expressed as a percentage of the value of the funds' outstanding shares at a start date (January 2020). This value is similar to that of funds' assets excluding leverage. Capital inflows and outflows are proxied by the transactions of shares or units issued by the funds.

Pension funds

Contributions to pension funds have continued to decline despite their increased profitability and total assets. Gross contributions to pension funds remained on the downward trend that began in 2021, decreasing by more than 10% year-on-year to June 2024. Lower tax incentives for contributions to individual pension schemes continue to disincentivise investment in such instruments. Meanwhile, their long-term historical profitability (25 years) has risen by 5 bp from June 2023, to stand at 2.3% in June 2024. This is far less than the (shorter-term) average annual return, which increased from 3.7% in June 2023 to 8.9% a year later. Total pension scheme assets increased by 6% in June 2024, compared with the same month a year earlier.

Specialised lending institutions

In June 2024 the market share of specialised lending institutions (SLIs) remained on the slight upward trend of recent years. SLIs accounted for 3.8% of overall lending by SLIs and deposit institutions to the non-financial private sector at June 2024, up 0.1 pp from 12 months earlier. However, most of this share (3.1%) corresponds to SLIs consolidated in banking groups, which represent 82% of SLIs' total lending.

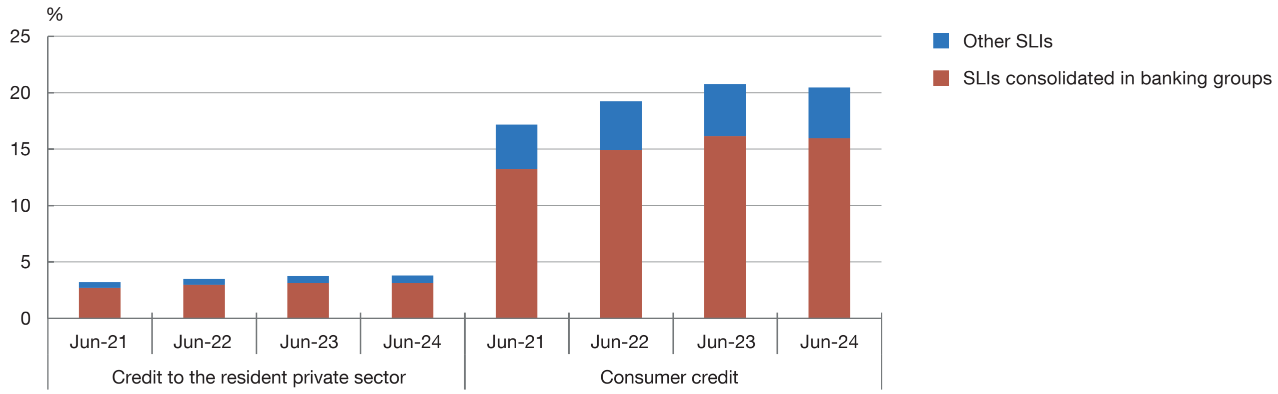
SLIs' market share is considerably higher in the consumer credit segment, although it declined slightly to June 2024. Specifically, it fell 0.3 pp in the 12 months to June 2024, to 20.5%. In the consumer credit segment, SLIs consolidated in banking groups had a market share of 16% in June 2024, down 0.1 pp year-on-year (see Chart 2.19.a).

The sharp slowdown in the growth of consumer lending by SLIs contributed to their loss of share in this segment. In June 2024 consumer credit from SLIs increased by 3.7% year-on-year, down 6.5 pp on a year earlier (see Chart 2.19.b, left-hand panel), whereas in the case of deposit institutions, it grew by 5.7% year-on-year, 5.5 pp more than a year earlier. Part of the slower growth in consumer lending by SLIs is linked to the way these loans' credit risk is managed within their consolidated banking groups.

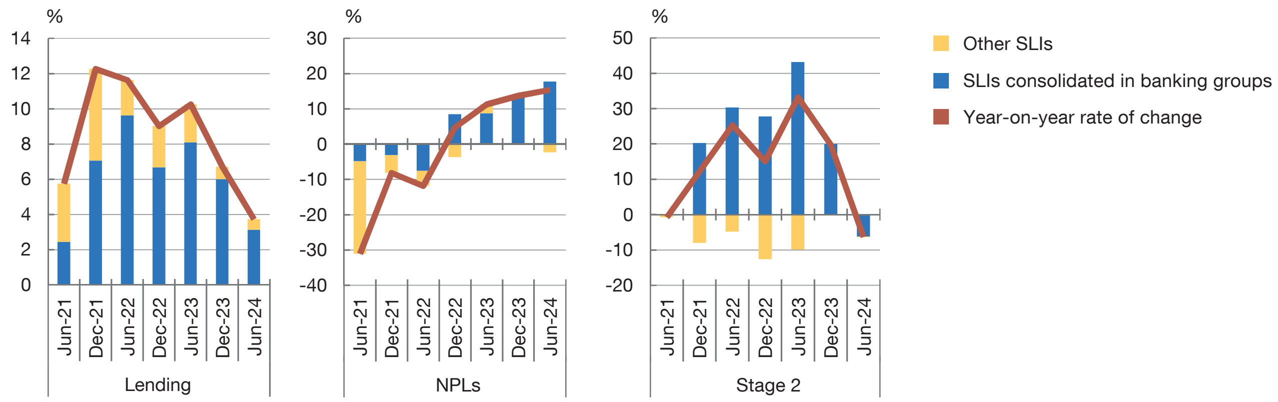
The quality of consumer credit provided by SLIs also deteriorated slightly. Non-performing assets in this segment increased year-on-year by 15.4% in June 2024 (compared with -1% for deposit institutions), 1.7 pp more than in December 2023 and 4.2 pp more than in June 2023 (see Chart 2.19.b, central panel). Thus, SLIs' non-performing loan (NPL) ratio in the consumer segment has increased by 0.4 pp in the last 12 months, to 3.8%. Meanwhile, Stage 2 consumer loans from SLIs decreased year-on-year by 6.4% in June (compared with a 24.6% increase in such loans from deposit institutions), partly correcting the strong growth recorded up to December 2023 (19.7%) (see Chart 2.19.b, right-hand panel). SLIs consolidated in banking groups play an important role in these developments, given that they account for a large share of such institutions as a whole.

Chart 2.19
SLI lending as a share of the system's total lending (SLIs and deposit institutions) grew moderately again in 2024, although it declined slightly in consumer credit, where the NPL ratio rose but the Stage 2 ratio decreased

2.19.a Lending by SLIs as a share of lending by deposit institutions and SLIs, by portfolio
Business in Spain. ID



2.19.b Consumer credit. Year-on-year change in lending, NPLs and Stage 2 loans
Contributions by type of institution. Business in Spain. ID



SOURCE: Banco de España.

2.2.2 Systemic interconnections

Direct interconnections[15] between the banking and money market fund sector[16] and the other financial sectors declined in Spain between 2021 Q2 and 2024 Q2. In terms of both assets and liabilities, this reduction was driven by bank and money market fund holdings of assets and liabilities from other non-bank financial intermediaries (i.e. excluding pension funds, insurance companies and non-monetary investment funds) (see

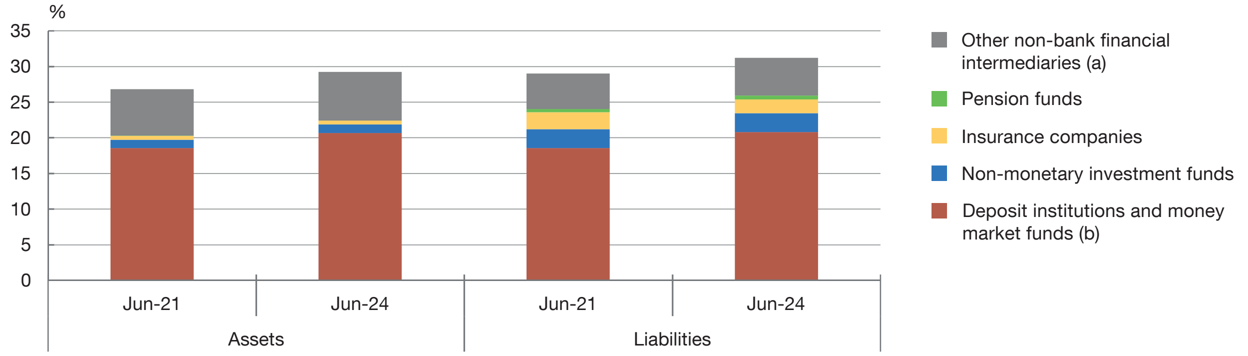
15 Direct interconnections refer to the cross-holdings of assets and liabilities between the different financial sectors.

16 As shown in the previous sub-section, in Spain money market funds account for a negligible proportion of the aggregate comprising such funds and deposit institutions (which make up the banking sector). This classification is used here for comparison purposes with the statistical information for the euro area, which aggregates both sub-sectors.

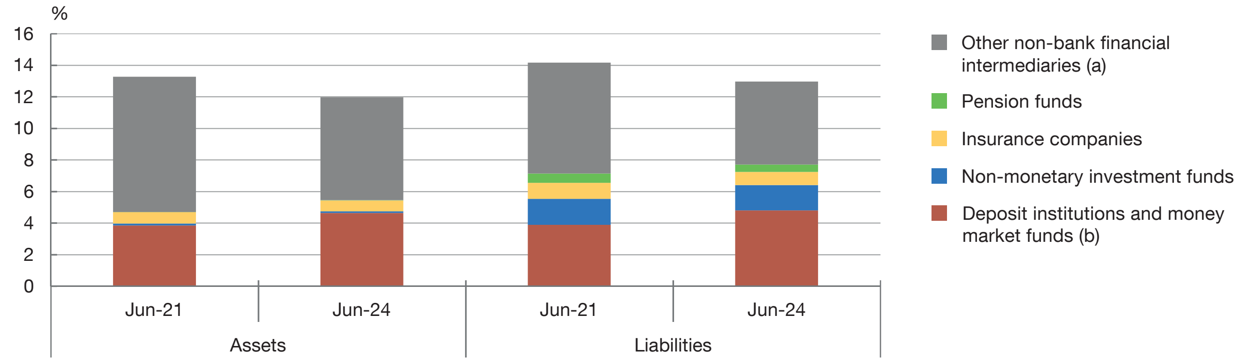
Chart 2.20

The share of direct interconnections between the banking sector and other financial sectors decreased in 2024 in Spain, but remained stable in the euro area overall

2.20.a Breakdown of the assets and liabilities of euro area deposit institutions and money market funds from exposures to other financial sectors (as a % of total assets)



2.20.b Breakdown of the assets and liabilities of Spanish deposit institutions and money market funds from exposures to other financial sectors (as a % of total assets)



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

a Other non-bank financial intermediaries include SLIs, venture capital companies, securities dealer companies, special-purpose vehicles, central counterparty clearing houses, real estate investment trusts, securities agencies, collective investment institution management companies, mutual guarantee societies, financial group head offices, appraisal companies, payment institutions, holding companies, special-purpose entities that issue securities and other specialised financial institutions. In Spain holding companies and special-purpose vehicles accounted for 52% and 24%, respectively, of the sector's total assets in 2023 Q4.

b The deposit institution sector is much larger, both in Spain and the euro area, than the money market fund sector. In particular, Spanish deposit institutions had total assets of €2,912 billion in 2024 Q2, while money market funds had only €19 billion. In the euro area these figures were €37,929 billion and €1,797 billion, respectively.

Chart 2.20).[17] Conversely, exposures (primarily interbank transactions) between banking and money market fund sector institutions themselves increased by almost 1 pp between June 2021 and June 2024, although they continue to account for a small fraction of the sector's total assets in the case of Spain (4.6% at June 2024). In the euro area as a whole, interconnections between the banking and money market fund sector and the other financial

17 Other non-bank financial intermediaries include SLIs, venture capital companies, securities dealer companies, special-purpose vehicles, central counterparty clearing houses, real estate investment trusts, securities agencies, collective investment institution management companies, mutual guarantee societies, financial group head offices, appraisal companies, payment institutions, holding companies, special-purpose entities that issue securities and other specialised financial institutions. In Spain, holding companies and special-purpose vehicles accounted for 52% and 24%, respectively, of the sector's total assets in 2023 Q4.

sectors have held steady throughout this period. However, as in Spain, those between banking and money market fund sector institutions increased by around 2 pp, also due largely to interbank market dynamics.

The risk of contagion in the domestic interbank market seems contained, particularly for the most systemically important institutions. The additional losses from credit quality adjustments in interbank positions[18] following an initial shock to bank capital consistent with the result of the adverse stress test scenario described in Box 2.1 have been estimated, drawing on a financial stress contagion model.[19] Despite the severity of the assumptions underlying the simulation exercise, in the event of contagion there would be an estimated drop of less than 1 pp in the CET1 ratio of the most systemically important institutions with international activity (FLESB - International Institutions) and the majority – in terms of assets – of other systemically important institutions (FLESB - Other SSM Institutions) (see Chart 2.21). CET1 ratio losses of more than 2.5 pp would only be seen at 16% – in terms of assets – of the less significant institutions (LSIs) considered in the FLESB exercise.[20]

In addition to the direct interconnections between financial intermediaries, there are also indirect interconnections related to their investment structures. As mentioned in previous Financial Stability Reports,[21] because the banking sector and other types of intermediaries (such as investment and pension funds and insurance companies) have common holdings of marketable assets, if one sector sells off assets (for example, in response to a liquidity shock), it could cause capital losses for the other sectors by driving down the prices of those securities. These common holdings include general government debt securities, which partly mitigates this risk, since they are primarily held as liquidity reserves to cope with disruptions (see sub-section 2.1.1 in this chapter). In Spain, these shared holdings with investment and pension funds and insurance companies accounted for around 45% of the banking sector's marketable securities portfolio in 2024 Q2.

Since the beginning of 2024 the correlation between the returns on crypto-assets and those on certain traditional financial assets has increased. An analysis of the correlation

18 This model focuses on the reduction in interbank assets' expected value due to adverse movements in the credit quality of the borrowers involved. In particular, contagion occurs when a negative shock affecting a borrower's capital leads its lenders to revise upwards the probability of default of their exposures to that borrower, thereby reducing the expected value of such exposures at maturity.

19 For more information, see Battiston, Puliga, Kaushik, Tasca and Caldarelli (2014) and Carro and Stupariu (2024). In particular, the exercise assesses the sensitivity of the system to significant deteriorations in solvency, such as those that occur under extreme adverse scenarios. It should be noted, however, that the adverse stress test scenario's full negative impact on capital would not be felt by banks instantly, but gradually. This means that banks could react by adjusting their interbank exposures to reduce their risk vis-à-vis the most affected institutions. However, these actions could trigger a considerable tightening of financing conditions in the interbank market. Moreover, if the deterioration in solvency used as the initial shock is priced in by the market once the risks materialise at the start of the exercise's horizon, the contagion could be quicker and more similar to the assumptions in this simulation.

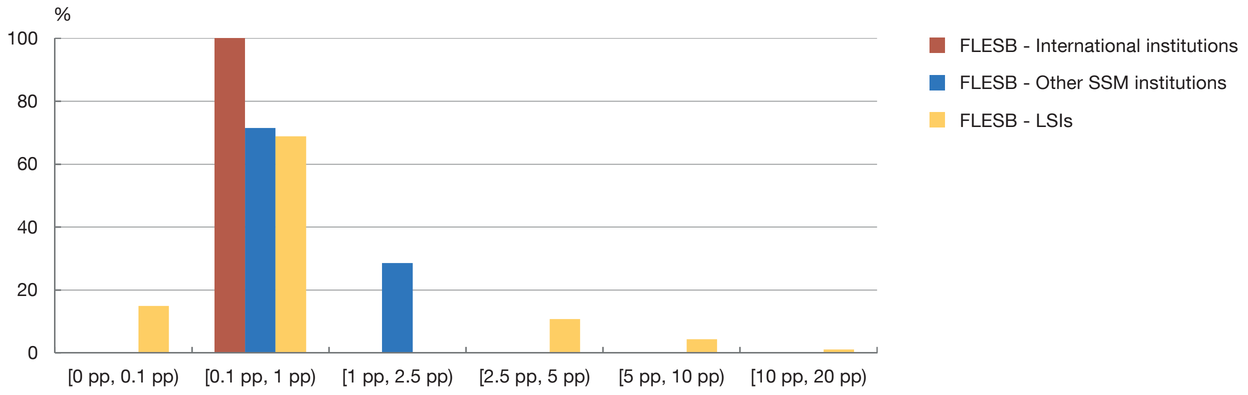
20 In 2024 Q2 the total assets of the FLESB - International institutions, FLESB - Other SSM institutions and FLESB - LSIs groups were €1,436 billion, €1,041 billion and €177 billion, respectively. Interbank market tensions would also have an impact on other institutions not included in these groups, even if no significant effects were identified.

21 See Chart 2.25 of the Spring 2024 Financial Stability Report

Chart 2.21

The risk of contagion in the domestic interbank market through the credit quality channel seems contained, particularly for the most systemically significant institutions

2.21.a Distribution of the impact of contagion on 2023 RWAs, weighted by total assets, by type of institution (a) (b)



SOURCE: Banco de España.

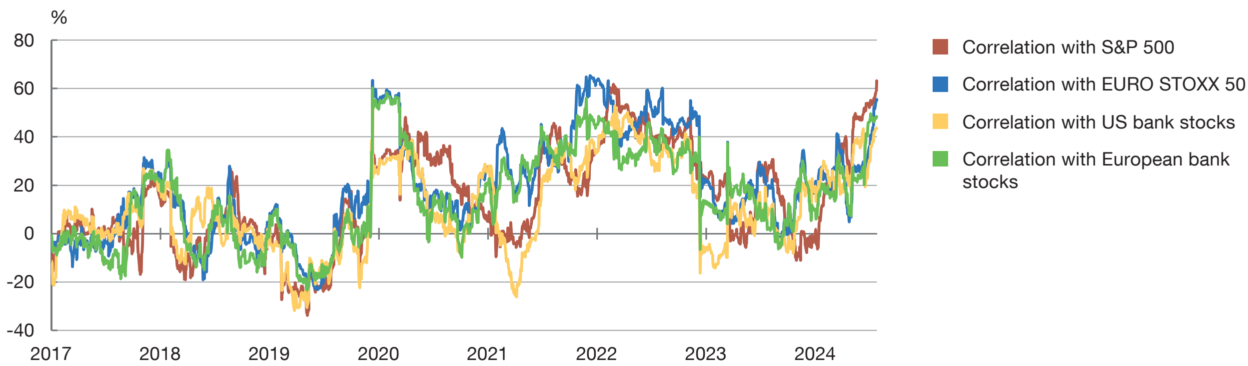
a The impacts depicted are due solely to contagion through the interbank exposure network and would occur in addition to the direct impact of the initial shock to some system institutions. As an initial shock, a capital consumption is applied to each institution included in the FLESB stress test described in Box 2.1 equivalent to the average of the sub-sample to which it belongs: significant institutions with the most international activity (International institutions), other significant institutions directly supervised by the SSM (Other SSM institutions) and a group of less significant institutions under the direct supervision of the Banco de España (LSIs). The average capital consumption is for the scenario's entire projection horizon (2024-2026). Contagion was simulated using the DebtRank model (see Battiston, Puliga, Kaushik, Tasca and Caldarelli, 2014, and Carro and Stupariu, 2024).

b In 2024 Q2 the total assets of the FLESB - International institutions, FLESB - Other SSM institutions and FLESB - LSIs groups were €1,436 billion, €1,041 billion and €177 billion, respectively.

Chart 2.22

The correlation between crypto-asset and stock market returns has increased

2.22.a Correlation between the daily returns of a crypto-asset index and of traditional assets (a)



SOURCES: LSEG and MVIS Investable Indices

a The crypto-asset index used to calculate the correlations is the MVIS CryptoCompare Digital Assets 100 Index, which comprises the top 100 backed and unbacked crypto-assets by market value. The correlations are calculated using three-month rolling windows of each index's daily returns. Returns for US and European bank stocks are based on banking indices for each of these regions.

between the daily returns of a crypto-asset index and of various stock market indices (including the US and European stock market indices and banking sub-indices) has found these correlations to be positive. This has particularly been the case since the COVID-19 health crisis, with correlations reaching an all-time high in 2022 and returning to near-peak levels in 2024 (see Chart 2.22). Investors in crypto-assets are therefore exposed to downward corrections to their value when there are tensions in the broader financial markets, associated with equity market downturns.