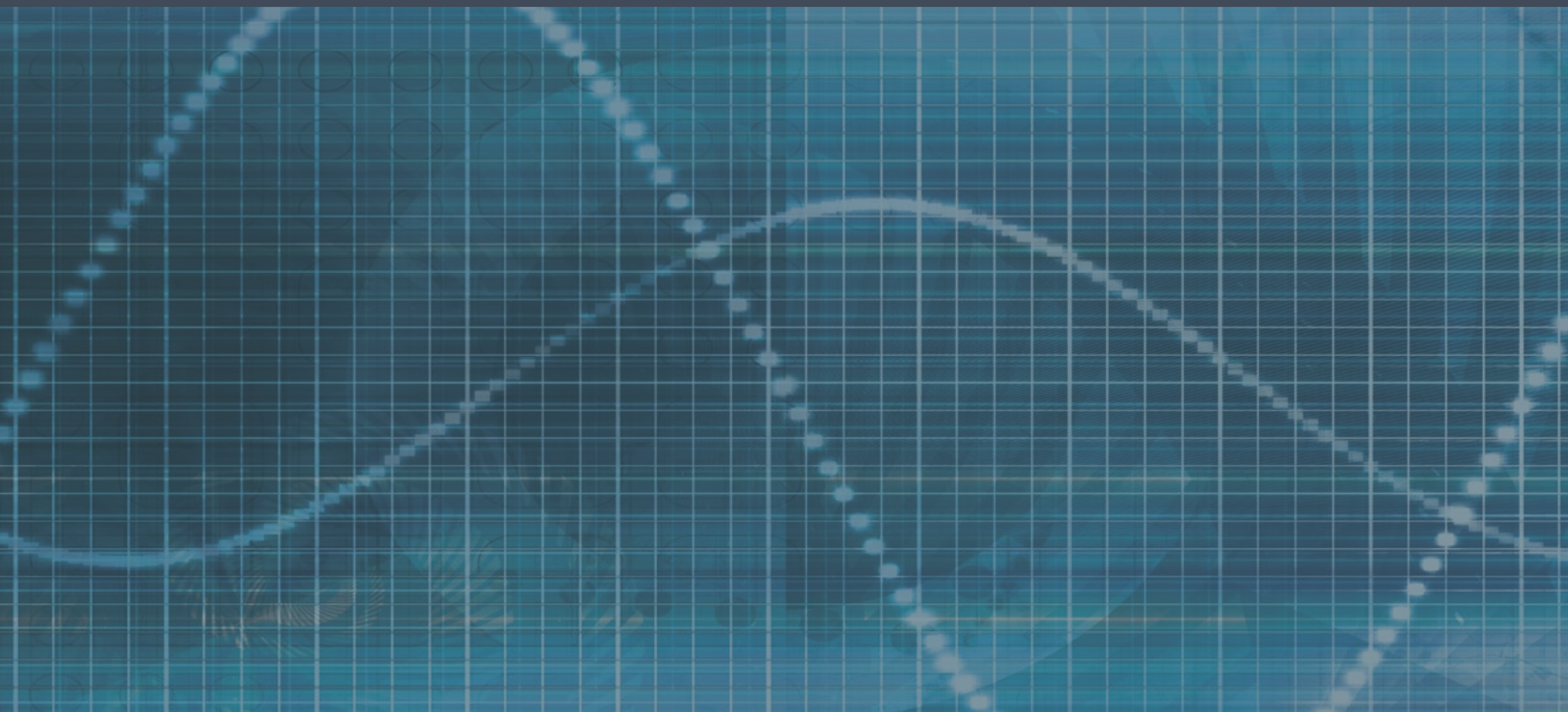
ANNUAL REPORT

2023

AMCESFI | Autoridad Macroprudencial Consejo de Estabilidad Financiera



GOBIERNO DE ESPAÑA | MINISTERIO DE ECONOMÍA, COMERCIO Y EMPRESA | BANCO DE ESPAÑA Eurosistema | CNMV Comisión Nacional del Mercado de Valores

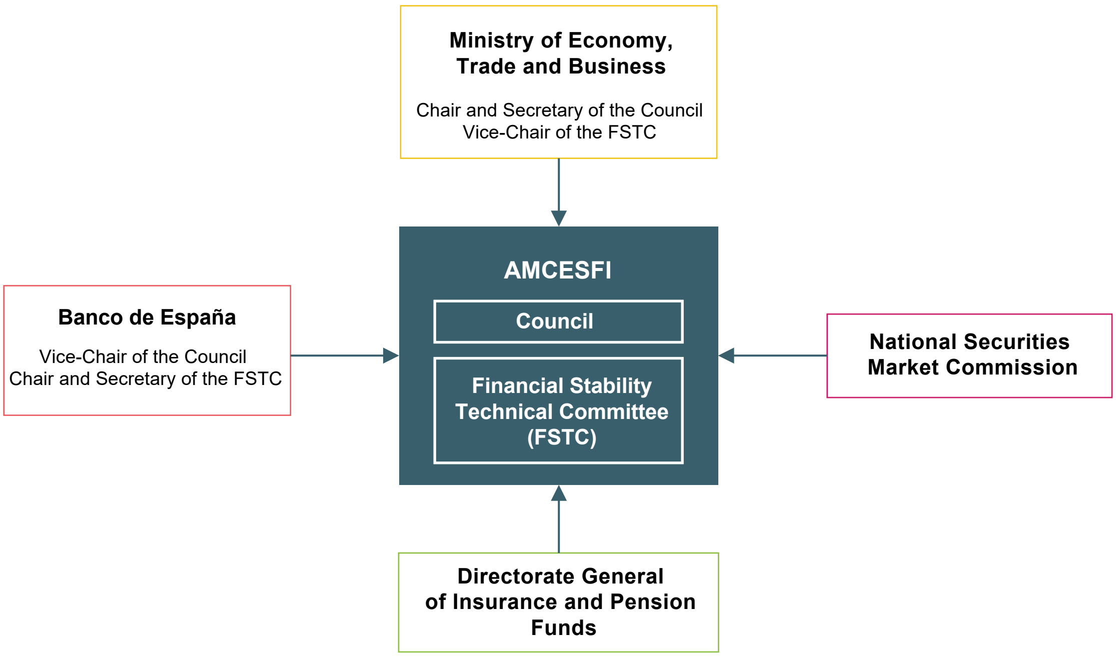
About AMCESFI

AMCESFI (*Autoridad Macroprudencial Consejo de Estabilidad Financiera*) is the macroprudential authority for the Spanish financial system. Set up in 2019, its goal is to contribute to the stability of the financial system as a whole by identifying, preventing and mitigating any circumstances or actions that may give rise to systemic risk. For this purpose, AMCESFI is empowered to issue opinions, warnings and recommendations on matters that could affect financial stability.

AMCESFI is organised as an operationally independent collegiate body attached to the Ministry of Economy, Trade and Business[1]. It also includes representatives of the three Spanish authorities with sectoral responsibilities for the regulation and prudential supervision of the Spanish financial system, namely the Banco de España, the National Securities Market Commission (CNMV) and the Directorate General of Insurance and Pension Funds (DGSFP) of the Ministry of Economy, Trade and Business.

AMCESFI comprises two permanent structures: a Council and a Financial Stability Technical Committee (FSTC). By its very nature, it has no human, material or

Figure 1 Structure of AMCESFI



SOURCE: AMCESFI.

1 Known as the Ministry of Economic Affairs and Digital Transformation over most of 2023. However, the Ministry's current name, in force since 31 December 2023, has been used in this Report.

financial resources of its own; its activity is underpinned by the support it receives from its member institutions.

This Annual Report is published in compliance with the accountability obligation envisaged in Article 19 of Royal Decree 102/2019 of 1 March 2019 whereby AMCESFI was created, its legal framework was established and certain aspects relating to macroprudential tools were implemented.

For more information about AMCESFI, see www.amcesfi.es.

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Introductory letter from the Minister for the Economy, Trade and Business

Carlos Cuerpo, Chair of the Council of AMCESFI

Dear reader:

It is a pleasure to present the Annual Report of the Spanish macroprudential authority (AMCESFI) for 2023, which includes the main activities carried out during the year and an analysis of financial stability in Spain.

2023 was characterised by significant challenges to financial stability. The rise in the main central banks' key policy rates, with the consequent tightening of financial conditions, the banking crises episodes in the United States and Switzerland, the heightened geopolitical tensions stemming from the ongoing war in Ukraine and the escalation of the conflict in the Middle East have influenced financial market developments. However, despite all these risks, the Spanish financial system has shown considerable resilience as a result of sound economic progress, the improvement of households' and firms' financial situation and improvements in the financial system's institutional framework.

The consolidation of the economic recovery in 2023 has enabled Spain to achieve higher GDP growth than other large neighbouring economies and above the euro area average. This growth has been underpinned by improvements in the labour market to generate more and better jobs and the favourable performance of our external sector, among other factors. Moreover, this has helped drive a reduction in the budget deficit and the government debt ratio. In short, in 2023 the Spanish economy continued to grow and to do so in a balanced manner, as recently illustrated by Spain's exit from the group of European Union (EU) countries with macroeconomic imbalances.

In addition, Spanish households and firms have faced tighter financial conditions from a better position. First, after more than a decade of deleveraging efforts interrupted only temporarily by the pandemic, Spanish households and firms show levels of indebtedness below the euro area average. Second, economic growth and job creation have helped sustain revenues to cope with higher financial expenditures.

The improvements in the Spanish financial system's institutional, supervisory and regulatory framework have been noted in the recent five-year assessment by the International Monetary Fund (IMF) through its Financial Sector Assessment Program. The IMF assesses the ability of credit institutions and households to withstand adverse shocks. Furthermore, the IMF acknowledges that since its previous assessment in 2017, the macroprudential policy framework has been substantially strengthened with the creation of AMCESFI. It also highlights improvements in other areas such as cyber security, market infrastructures, anti-money laundering and countering the financing of terrorism, and the fintech ecosystem in Spain.

AMCESFI maintained a substantial pace of activity during 2023 through its Council and Financial Stability Technical Committee meetings and other tasks, as described in this Annual Report. A particularly important milestone was the publication of its first Biennial Report on Climate Change Risks to the Financial System, with a focus on assessing the impact of climate change on the Spanish financial sector. As shown in this report, the high costs of not acting on climate change make such a choice unfeasible. This is why, if the aim is to decarbonise our economy, a gradual and predictable transition is the best alternative, as this course of action will allow the financial sector to contribute to the reallocation of necessary resources while preserving the financial stability of the system.

Another milestone in 2023 was the Spanish presidency of the EU Council in the second half of the year. Over these months, Spain's leadership helped push forward numerous actions in the field of European financial regulation, with significant achievements in banking and capital markets and payment systems legislation, among others. In addition, this presidency helped give prominence to the Spanish authorities' commitment to European financial stability, which is closely linked to national financial stability.

Since its inception in 2019, AMCESFI has performed its functions to prevent and mitigate systemic risk and to promote a sustainable contribution of the Spanish financial system to economic growth and well-being. AMCESFI has become a key forum for exchange and cooperation between the national authorities responsible for regulating and supervising the Spanish financial sector. It is an example of the coordination and joint effort of the Ministry of Economy, Trade and Business, the Banco de España, the National Securities Market Commission and the Directorate General of Insurance and Pension Funds. With the experience gained, AMCESFI will continue to work in a coordinated manner to preserve the stability of the Spanish financial system so that it can contribute to the growth of the economy and Spain's social well-being and cohesion.

1 AMCESFI activities in 2023

AMCESFI met regularly during its fifth year of activity. Specifically, the Council held three meetings in 2023 and the Financial Stability Technical Committee (FSTC) held four, complemented by ad hoc written procedures. The main issues addressed included most notably those relating to the main risks and systemic vulnerabilities identified, developments in the activity of the sectors comprising the financial system, the situation of the real estate sector, regulatory reforms in the area of sustainable finance, the designation of a national authority as the point of contact for the new pan-European cyber incident coordination framework, preparations related to the IMF's financial sector assessment programme for Spain, planning and drawing up regular public reports, and the review of AMCESFI's internal rules of procedure.

In 2023, AMCESFI published its first *Biennial Report on Climate Change Risks to Spain's Financial System,* in compliance with the mandate established in the Climate Change and Energy Transition Law.[2] The report includes an analysis of the estimated impact of transition and physical risks on Spain's financial system. The analysis suggests that such risks would be lower in a scenario where measures to drive the decarbonisation of the economy are adopted early and in an orderly fashion. It also justifies the advisability of transition measures being accompanied by mechanisms to mitigate the impacts on the reallocation of resources between sectors and between firms, as well as on the most vulnerable households. The report also addresses various challenges for the financial authorities, stemming from the uncertainty over climate change, the limitations of the analytical models currently used and the need to increase the available information.

On the macroprudential front, AMCESFI issued a favourable opinion on the macroprudential measure adopted by the Banco de España on the identification of domestic systemically important institutions. In accordance with Article 16 of Royal Decree 102/2019, over the course of 2023 the Banco de España informed AMCESFI of six macroprudential proposals relating to credit institutions. Specifically, AMCESFI's FSTC was notified of: (i) four quarterly decisions on the countercyclical capital buffer applicable to credit exposures in Spain, and (ii) two annual decisions on identifying and setting capital buffers for global and domestic (or other) systemically important institutions (G-SIIs and O-SIIs) (see Chapter 3.1). As regards the measures linked to O-SIIs, AMCESFI issued a favourable Opinion on the new methodology used by the Banco de España to determine this macroprudential requirement, in turn based on the revised framework of the European Central Bank (ECB) on minimum buffers for O-SIIs in the Banking Union. For their part, the CNMV and the DGSFP did not inform AMCESFI of any macroprudential initiatives.

2 Law 7/2021 of 20 May 2021 on climate change and the energy transition.

Table 1.1 Composition of AMCESFI's Council at 31 December 2023

Institution	Position	Name	Position on the Council
Ministry of Economy, Trade and Business	Minister	Carlos Cuerpo Caballero	Chair
Banco de España	Governor	Pablo Hernández de Cos	Vice-Chair
National Securities Market Commission	Chair	Rodrigo Buenaventura Canino	Member
Banco de España	Deputy Governor	Margarita Delgado Tejero	Member
National Securities Market Commission	Vice-Chair	Montserrat Martínez Parera	Member
Ministry of Economy, Trade and Business	State Secretary for Economic Affairs and Support for Business	Gonzalo García Andrés	Member
Ministry of Economy, Trade and Business	Director General of Insurance and Pension Funds	Sergio Álvarez Camiña	Member
Ministry of Economy, Trade and Business	Secretary-General of the Treasury and International Finance		Secretary

SOURCE: AMCESFI.

AMCESFI's members shared their institutions' reports and publications on financial stability and macroprudential policy. The FSTC was informed of the publication of the Banco de España's spring and autumn editions of the *Financial Stability Report* and the *Financial Stability Review,* as well as the CNMV's half-yearly *Financial Stability Notes.* The Banco de España also shared its 2023 report on the stress testing of the Spanish banks under its direct supervision, which it submitted to the Spanish Parliament in compliance with Article 55 of Law 10/2014 of 26 June 2014 on the regulation, supervision and solvency of credit institutions. Annex 3 includes a detailed list of the main publications – relevant for financial stability – drawn up by AMCESFI's member institutions over the past year.

At end-2023 AMCESFI's chairmanship changed as a result of the appointment of the Minister for the Economy, Trade and Business. On 29 December 2023, Carlos Cuerpo Caballero (formerly the Secretary General of the Treasury and International Financing) took up his position at the helm of the Ministry of Economy, Trade and Business – formerly the Ministry of Economic Affairs and Digital Transformation (associated with the Office of the First Deputy Prime Minister) – thus becoming the Chair of the Council of AMCESFI, replacing Nadia Calviño Santamaría, who had chaired AMCESFI since its inception in March 2019.

In 2023 AMCESFI published its *Annual Report 2022.* The report was published, in Spanish and English, on 26 January 2024, and is available on AMCESFI's website (www.amcesfi.es).

Table 1.2 Composition of AMCESFI's FSTC at 31 December 2023

Institution	Position	Name	Position on the Committee
Banco de España	Deputy Governor	Margarita Delgado Tejero	Chair
Ministry of Economy, Trade and Business	Secretary-General of the Treasury and International Finance		Vice-Chair
National Securities Market Commission	Vice-Chair	Montserrat Martínez Parera	Member
Ministry of Economy, Trade and Business	Director General of the Treasury and Financial Policy	Álvaro López Barceló	Member
Ministry of Economy, Trade and Business	Director General of Insurance and Pension Funds	Sergio Álvarez Camiña	Member
Banco de España	Director General Financial Stability, Regulation and Resolution	Ángel Estrada García	Member and Secretary
Banco de España	Vice-Chair	Mercedes Olano Librán	Member
National Securities Market Commission	Director General of Strategic Policy and International Affairs	Víctor Rodríguez Quejido	Member
National Securities Market Commission	Director General of Markets	Ángel Benito Benito	Member
National Securities Market Commission	Director General of Institutions	José María Marcos Bermejo	Member

SOURCE: AMCESFI.

Figure 1.1 Composition of AMCESFI's Board at 31 December 2023

Carlos
Cuerpo Caballero
(Chair)

Pablo
Hernández de Cos
(Vice-Chair)

Rodrigo
Buenaventura
Canino
(Member)

Margarita
Delgado Tejero
(Member)

Montserrat
Martínez Parera
(Member)

Gonzalo
García Andrés
(Member)

Sergio
Álvarez Camiña
(Member)

SOURCE: AMCESFI.

2 Macro-financial environment

2.1 Main macro-aggregates

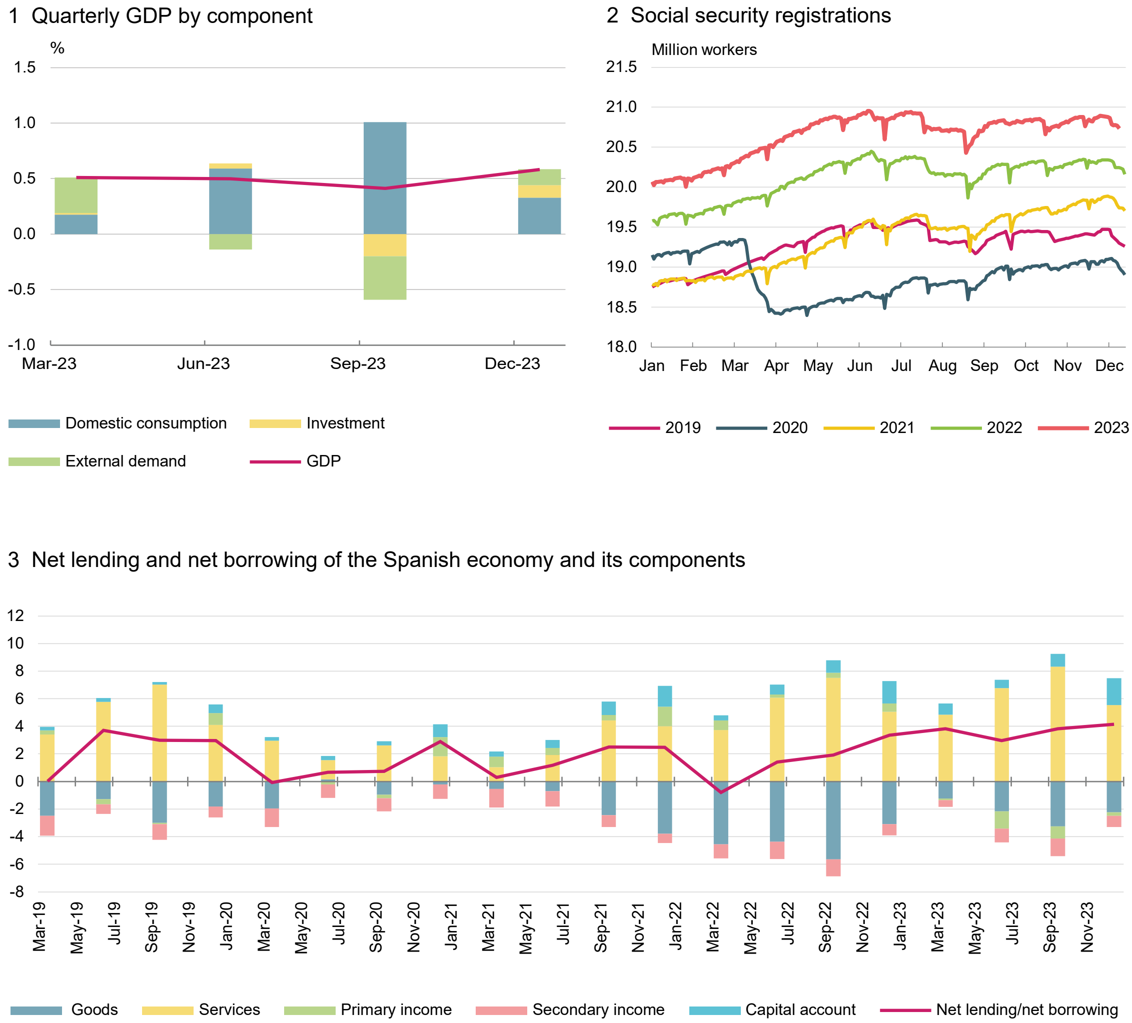
Building on its previous momentum, the Spanish economy saw GDP growth of 2.5% in 2023, exceeding analysts' forecasts. Following the contraction in economic activity in 2020 as a result of COVID-19, Spain's economy saw three consecutive years of growth and has shown greater buoyancy then the main euro area economies. In 2023 the factors behind the Spanish economy having grown above expectations were the increase in private and public consumption, the strength of the labour market and the deployment of the Recovery, Transformation and Resilience Plan.

Job creation once again broke the all-time records of the previous year. 2023 came to a close with almost 20.8 million social security registrations, with headcount employment rising by 539,740 over the year (see Chart 2.1.2). Although growth slowed in the second half of the year, in seasonally adjusted terms, the unemployment rate continued to fall between July and December and the labour market remained notably resilient. As a result, at end-2023 the unemployment rate stood at 11.80% (see Chart A1.1 of Annex 1), the lowest year-end figure since 2007. Moreover, this was accompanied by an improvement in the quality of employment, as shown by the ongoing downward trend since 2021 in the temporary employment rate, which stood at 16.49% at end-2023.

The changes in GDP in Spain were marked by slower growth in the euro area and high interest rates. The slower growth in the euro area would explain the decline in Spanish exports in Q2 and Q3. In turn, the contribution of tourism expenditure to GDP growth in Spain decreased, after having exceeded pre-pandemic levels. Meanwhile, the policy rate hiking cycle came to an end in 2023. The cost of lending to households and firms rose in 2023, which helps to explain the decline in new lending and, together with the extraordinary debt repayments, led to a reduction in the outstanding balance of both segments. In spite of these developments, the non-performing loan ratio remained at low levels, ending 2023 with a downward trend compared to recent years.

The Spanish economy's core internal and external metrics performed well in 2023. The current account surplus went from 0.6% of GDP in 2022 to 2.6% in 2023, driven by the decrease in the price of energy imports. This marked 12 consecutive years in which the Spanish economy posted a current account surplus. The capital account balance reached 1.1% of GDP, thus posting a surplus balance, as in 2022. Overall, the Spanish economy's net lending stood at 3.7% of GDP in 2023. This net lending, together with nominal GDP growth, helped to continue reducing the negative net international investment position (-52.8% of GDP in 2023, versus -60% in 2022). As regards the internal fundamentals, the deleveraging process continued, with private debt falling to

Chart 2.1 Main macro-aggregates

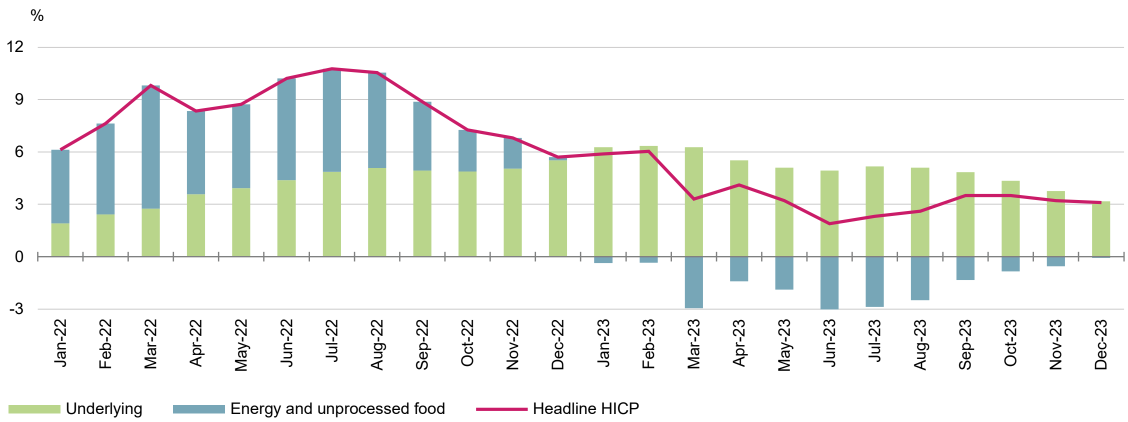


SOURCES: ECB, Banco de España and INE.

111.7% of GDP in 2023, compared with 123.5% 12 months earlier. This was largely due to higher income and, to a lesser extent, to a reduction in nominal debt.

In 2023 the Spanish economy continued to experience a disinflationary process, with inflation dropping from 5.7% year-on-year in December 2022 to 3.1% in December 2023. The CPI fell sharply in year-on-year terms between March and June, picked up from July to September and remained above 3% in Q4. This can be partially explained by the measures adopted to curb price increases, the decline in energy and food prices, base effects and a contractionary monetary policy. Also, year-on-year underlying inflation fell by 7% in December 2022 to 3.8% at end-2023, with no second round effects to date and with wage increases being absorbed by lower profit margins, especially in 2023 H2.

Chart 2.2 Breakdown of the inflation rate (year-on-year rate of change)



SOURCE: INE.

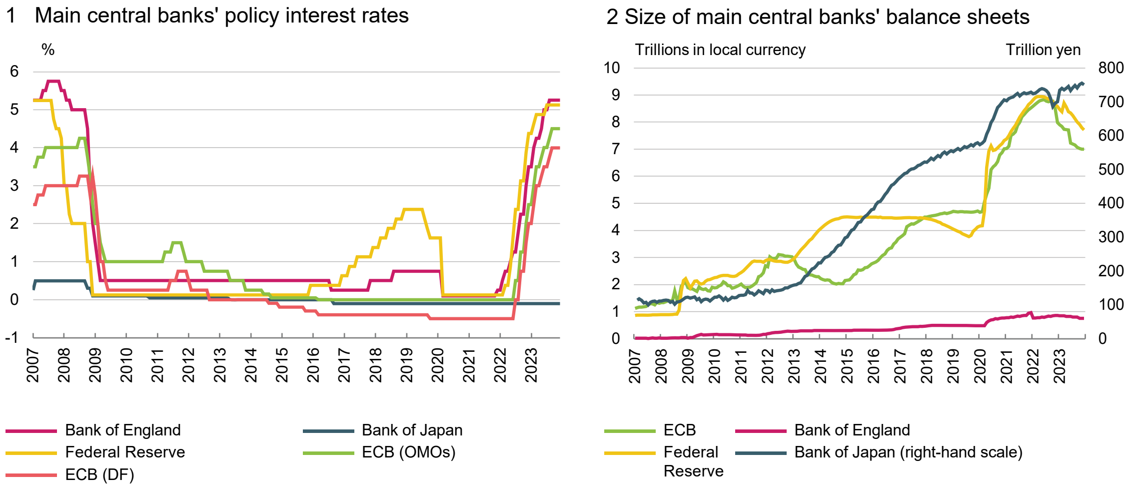
The reduction in the government deficit to 3.66% of GDP in 2023 is mainly attributable to the strong increase in revenue in absolute terms and to government expenditure growing at a slower pace than GDP. Tax revenue stood at an all-time high of €271,935 million, a 6.4% increase on the figure recorded in 2022, as a result of the increase in economic activity, the swift pace of job creation and inflation. In turn, the roll-out of measures to mitigate the effects of inflation (without which the deficit would have stood at 2.5% of GDP) contributed to the increase in expenditure. Also, compared with 2022, the general government deficit fell by 16%, to the aforementioned 3.66% of GDP.

These developments made it possible to continue reducing the government debt ratio, to 107.7% of GDP at end-2023, 3.9 percentage points (pp) below the level at end-2022 (see Chart A1.1 of Annex 1). This was 12.6 pp below the end-2020 figure. Sovereign debt issuance fell by almost €5 billion, to €65,126 million, while gross issuance stood at €251,995 million. Given the current contractionary monetary policy, the average cost of government debt issued in 2023 grew to 3.44%, compared with 1.35% in 2022, while the cost of outstanding government debt increased more moderately, from 1.73% in 2022 to 2.09% in 2023.

2.2 Money markets and central banks

In 2023 central banks prolonged the contractionary monetary policy initiated in 2022, significantly affecting the behaviour of money markets. Compared with 2022, the pace at which the main central banks raised their interest rates slowed, while the reduction of their balance sheets accelerated. Between February and July the United States Federal Reserve System raised its policy interest rates by 100 basis points (bp), leaving them unchanged since then. The Bank of England hiked its benchmark interest rate by 175 bp between

Chart 2.3 Central banks



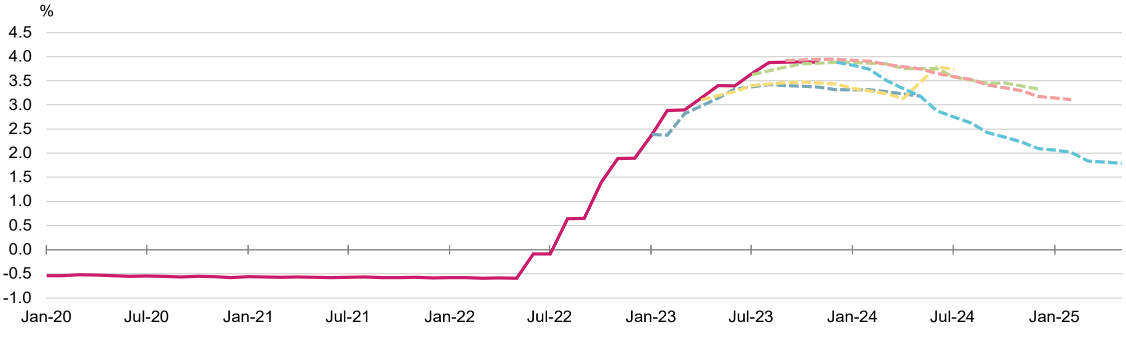
SOURCES: ECB, the Federal Reserve System, Bank of England and Bank of Japan.
NOTE: DF: deposit facility; OMOs: open market operations.

February and August. The exception was the Bank of Japan, which maintained the expansionary stance of previous years, continuing its yield curve control policy.

In 2023 the Governing Council of the European Central Bank (ECB) raised interest rates by 200 bp between February and September, leaving them unchanged at the last two meetings of the year. In early 2023 the deposit facility rate, which is the benchmark rate in the current environment, stood at 2%. The ECB's Governing Council opted for two 50 bp hikes at its February and March meetings, reducing the pace of the increases to 25 bp at each of the following four meetings. Therefore, at end-2023 the policy rates stood at 4% for the deposit facility, 4.5% for the main refinancing operations and 4.75% for the marginal lending facility.

The expected path of the Eurosystem's policy interest rates was slightly volatile over the course of 2023, but trended downwards in 2024. The swaps segment of the money market, which rests partly on the overnight interest rate (the euro short-term rate (€STR) in the euro area), known as the overnight index swap (OIS), is used mainly for hedging risks (in the form of spot contracts) and speculating on the path of policy interest rates (in the form of forward contracts). As can be seen in Chart 2.4, the different forward curves show a progressive rise in interest rates in 2023 H1, which stabilised in H2 and began to price in interest rate cuts in 2024. At end-2023 earlier and sharper interest rate cuts than expected were observed. In December 2023 the OIS futures market was pricing in a terminal policy (deposit facility) rate of 1.75%. It should be noted, however, that OIS forwards do not capture the pure expectation of the policy rate, as they incorporate a risk premium.

Chart 2.4 Changes in the €STR and future outlook based on 1-month forward OIS agreements (a)

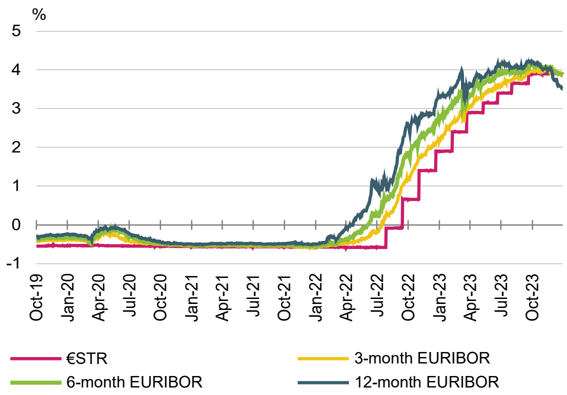


SOURCES: Refinitiv and own calculations.

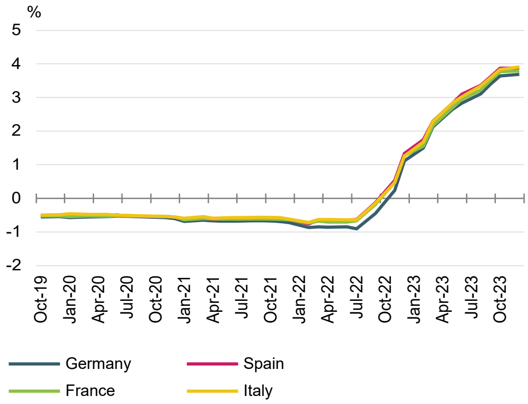
a The red line denotes the level that the €STR would reach following an initial hypothetical rise of 10 bp in the ECB's deposit facility rate. The different dotted lines show the implied future rates in an €STR-based overnight index swap (OIS) that were quoted on the market on the dates indicated.

Chart 2.5 Reference money market interest rates

1 Reference unsecured money market interest rates



2 Reference secured money market interest rates, by country (a)

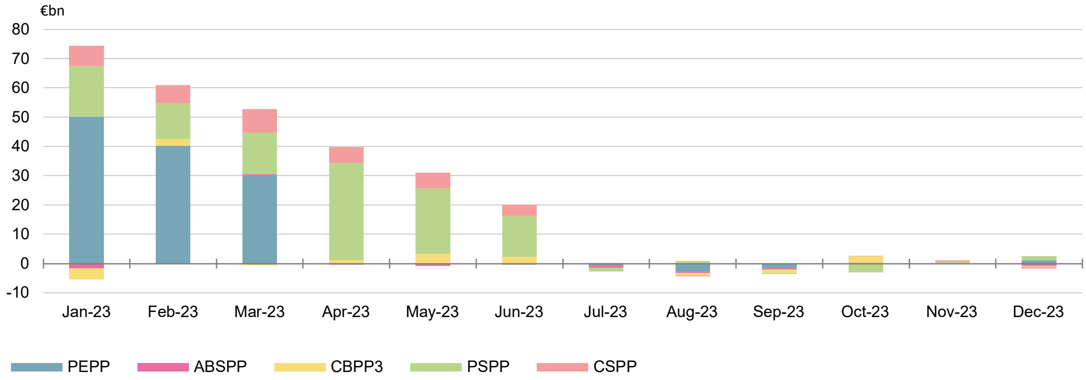


SOURCES: BECB (Money Market Statistical Reporting) and Refinitiv.

a For overnight transactions.

The policy interest rate hikes continued to pass through to monetary market rates. In relation to the rates determined in the unsecured segment, the €STR largely followed the change in the deposit facility rate, remaining 10 bp lower, as a result of the composition of the transactions comprising the calculation of the €STR and the nature of the agents that can access the ECB's transactions, given the inability of non-bank agents to access the deposit facility. The EURIBOR rates at different maturities varied along similar lines, albeit reflecting different positive spreads over the overnight rate depending on their respective maturities. In November 2023 the 12-month EURIBOR started to fall, meeting agents'

Chart 2.6 Net Eurosystem asset purchases, by programme



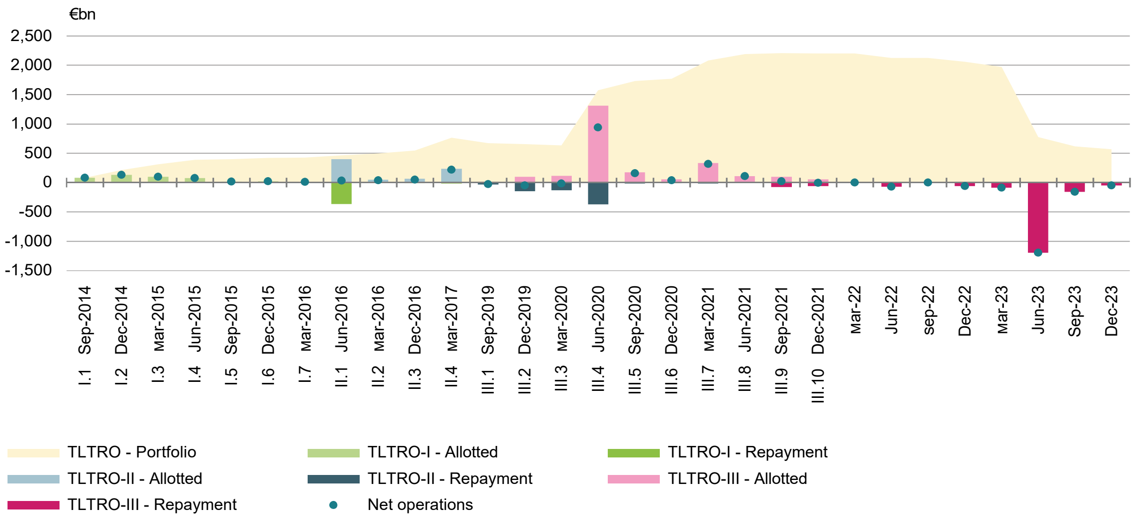
SOURCE: ECB.
NOTE: The asset purchase programme (APP) comprises the public sector purchase programme (PSPP), the third covered bond purchase programme (CBPP3), the corporate sector purchase programme (CSPP), the asset-backed securities purchase programme (ABSPP) and the pandemic emergency purchase programme (PEPP).

expectations of lower rates in 2024, once the ECB signalled in September that the rate hikes might have come to an end. Meanwhile, rates in the secured (or repo) segment also reflected the normalisation of monetary policy, albeit with the occasional shortage of collateral for certain sovereign instruments, leading to a degree of lag in monetary policy transmission.

In 2023 the process of reducing the Eurosystem's balance sheet continued, and it shrank by €962 billion to €6.99 trillion, largely owing to repayments of targeted longer-term refinancing operations (TLTROs). TLTRO loan repayments accounted for €925 billion of said reduction, which took place over six different dates, such that the outstanding balance of TLTROs fell from €1.3 trillion to €392 billion as at December 2023. In the case of Spanish banks, the outstanding balance decreased by €111,414 million, to €22,441 million. The final TLTRO repayments will take place on the settlement dates in March, June and September 2024. The rise in policy interest rates led to a change in the composition of bank assets in the euro area. As a result of the remuneration of the deposit facility and the early repayment of TLTROs, the share of the balance of the deposit facility in bank assets grew considerably. As regards the country's bank assets, the balance of the deposit facility was 10.2% in Germany, 8% in Spain and 4.4% in Italy. The share of TLTRO funding declined in all countries as the repayment of TLTROs progressed. In Spain many banks made early repayments and the balance decreased rapidly (from a higher starting point) to the level in other countries.

The balance of the Eurosystem's asset purchase programme (APP) portfolio also started to be reduced. Net asset purchases under the pandemic emergency purchase programme (PEPP) totalled €18 million in 2023. Until November cumulative net purchases had fallen by €2,113 million. However, the reinvestments in November and December brought the net purchases balance to practically zero. Furthermore, on 14 December the Governing council announced changes to the

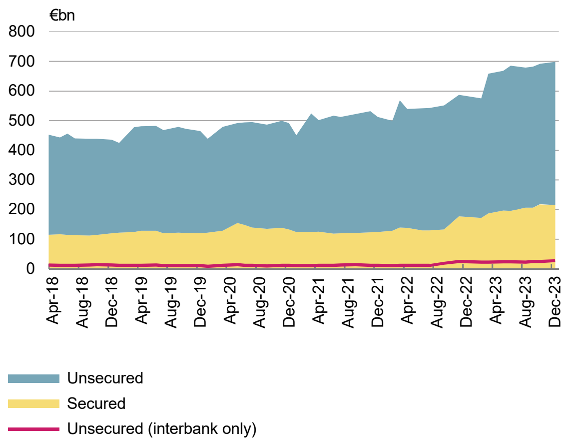
Chart 2.7 Targeted longer-term refinancing operations



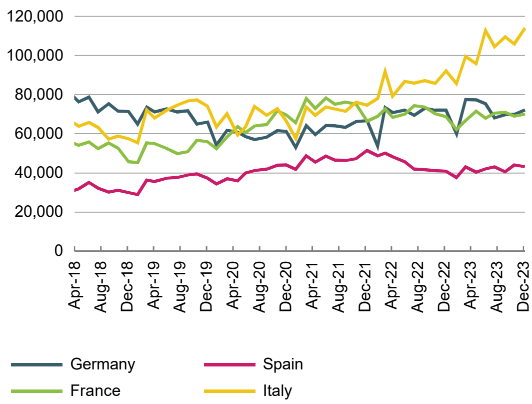
SOURCES: ECB and own calculations.

Chart 2.8 Financing on the money market

1 Average daily volume of transactions in the EU money market, by segment



2 Total lending to banks in a selection of countries



SOURCE: ECB (Money Market Statistical Reporting).

PEPP reinvestment policy to progress in the normalisation of the Eurosystem's balance sheet.[3] Therefore, it is projected that reinvestments will remain stable in 2024 H1, the size of the programme will shrink on average by €7.5 billion per month in 2024 H2 and there will be no reinvestments from end-2024. Also, net purchases under the asset purchase programme (APP) fell by €211,770 million in 2023 (see Chart 2.6). From March 2023 the reinvestment of the principal payments from maturing securities was ended and the APP portfolio started to

3 "Monetary Policy Decisions", ECB press release of 14 December 2023.

shrink at a rate of €15 billion per month on average. On 4 May the ECB Governing Council announced (and confirmed on 15 June) that it expected to discontinue reinvestments under this programme. The Eurosystem's total holdings of Spanish government debt at December 2023 stood at 509,699 million, representing 32% of the outstanding debt.

The volume of money market transactions grew by €86 billion in 2023. Activity gained buoyancy in the monetary markets in a setting of declining excess liquidity in the banking system. Thus, the average daily volume of transactions was up 14% for unsecured transactions (e.g. interbank deposits) and 15% for secured transactions (mainly repos). Money market financing played a more prominent role for credit institutions in Italy than in other countries such as France and Germany (see Chart 2.8).

3 Financial system sectoral developments

3.1 Banking sector

In 2023 the Spanish banking sector reached a historically high level of profitability, substantially exceeding 2022 profits. The strong growth in net interest income was the main driver of this improvement, as banks continued to pass-through higher interest rates asymmetrically to lending and deposits (more to lending), making it possible to comfortably offset the increase in the price of funding sources through the net interest margin. Lending contracted somewhat in the year, in line with the higher interest rate environment, although troubled exposure ratios have remained relatively stable. This also contributed to a strong performance by containing impairment losses, above all at the domestic level. While the Eurosystem's balance sheet continued to shrink in 2023 (which means lower funding facilities), the sector's liquidity position strengthened. In terms of solvency, however, no significant improvement in the regulatory common equity tier 1 (CET1) capital ratio was observed, although Spanish institutions currently have a comfortable aggregate position in relation to the minimum regulatory requirements.

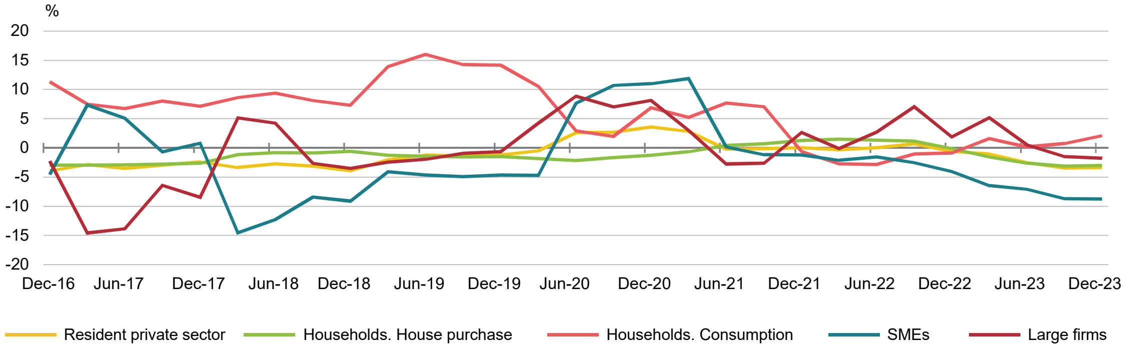
Changes in lending in Spain and abroad

In Spain, lending by deposit institutions to the resident private sector fell more sharply in 2023 than in 2022. The outstanding amount of credit in the year as a whole fell by 3.4% year-on-year (see Chart 3.1.1.1), for both households and firms and across the board by institution. However, this negative trend moderated in the latter part of the year, with the rates of change stabilising both for households and for non-financial corporations (NFCs) and sole proprietors. The increase in extraordinary debt repayments has contributed in part to these changes in lending. Lastly, lending picked up in financial corporations, despite the small weight of this portfolio in the resident private sector as a whole.

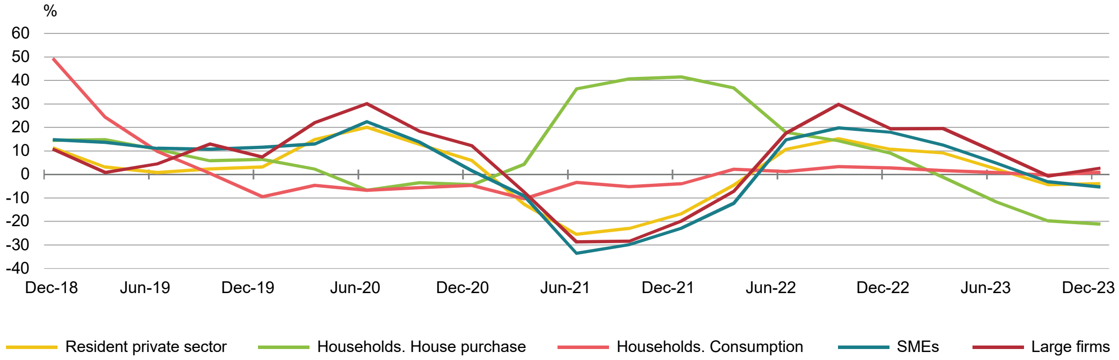
Lending to firms declined significantly in 2023, continuing the turnaround that started in the last quarter of 2022. In particular, the outstanding amount of lending to NFCs and sole proprietors decreased by 5.5% in 2023, to 4.1 percentage points (pp) more than in 2022. The decline was broad-based across sectors of activity, although it slowed slightly in the sectors hardest hit by the COVID-19 pandemic. By firm size, lending declined across the board, especially in SMEs and, within this category, in the smallest firms. In all cases the decrease in lending was greater than in the previous year, taking into account that lending to large firms increased by 1.8% in 2022 (falling by the same percentage in 2023). In the case of sole proprietors, the rate of decline increased by 4 pp to 8.7% year-on-

Chart 3.1.1 Change in the stock of lending and new lending

1 Year-on-year rate of change in lending. Business in Spain, bank-level data



2 Year-on-year rate of change of new lending accumulated over 12 months. Business in Spain, bank-level data



SOURCE: Banco de España.

year. Part of the decline in corporate lending was due to the repayment of loans granted under the public guarantee scheme implemented during the pandemic (which saw a year-on-year decrease of nearly 30% in 2023).[4]

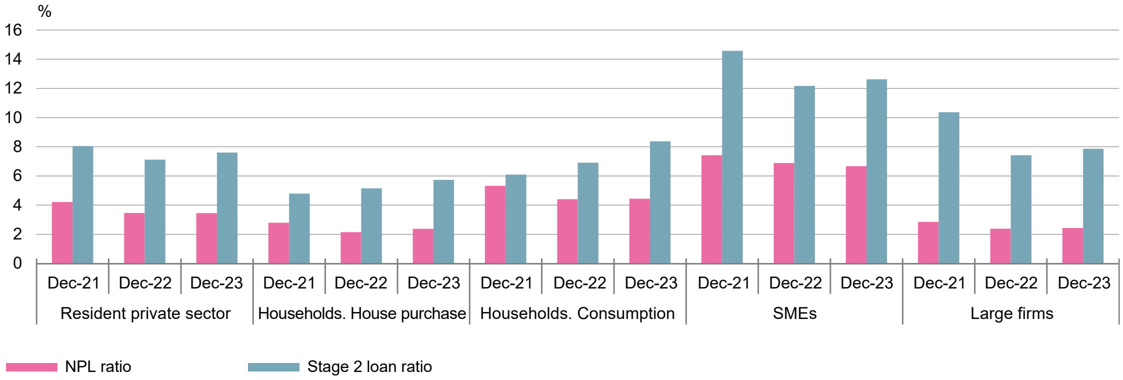
Lending to households decreased more than in 2022, owing to the behaviour of loans for house purchase. In 2023 the rate of decline in the outstanding credit balance was 2.3%, up 2.2 pp on 2022. The behaviour of households' loans varied widely depending on why the loans were granted. Loans for house purchase and renovation decreased by 3.1%, compared with a minor fall of 0.1% in 2022. This drop in loans for house purchase is the largest since 2015. By contrast, other lending to households grew by 1.1%, with the 2.1% increase in consumer credit (down by 0.9% in 2022) standing out.

In 2023 new lending decreased at a slower pace than the outstanding loan amounts. The amount extended was 3.1% lower than in 2022 for all households and firms. The decline was more pronounced among households

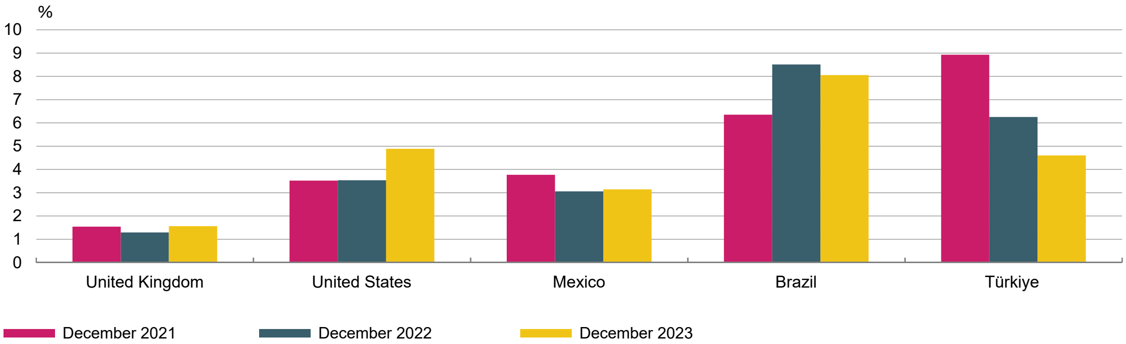
4 As no more ICO-backed loans will be granted, this is a closed portfolio, the volume of which decreases as non-troubled loans are repaid.

Chart 3.1.2 Troubled assets in Spain and abroad

1 NPL and Stage 2 loan ratios. Business in Spain, bank-level data



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



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.

(9.5%), but also affected NFCs and sole proprietors (1.1%). SME's performed markedly worse, with a 5.4% year-on-year decrease (see Chart 3.1.1.2). As regards households, new loans for house purchase fell by 17.2% in the year as whole, compared with growth of 2.7% in 2022.

The NPL ratio was virtually unchanged in 2023 (3.4% for the resident private sector as a whole), breaking the downward trend of previous years. This behaviour was observed for both households and firms (see Chart 3.1.2.1), as a result of a limited decline in the volume of NPLs and a contraction in credit. NPLs (the numerator of the ratio), decreased by 3.7% for the private sector as a whole, a much lower rate than that recorded a year earlier (-18.5%). By firm size, NPLs grew by 0.3% in large firms and fell by 11.5% in SMEs (resulting in the NPL ratio falling by 0.2 pp to 6.7%). The NPL ratio in loans to firms guaranteed by the Official Credit Institute (ICO) rose in 2023 (by 6.6 pp to 13.7%), in part owing to the reduction of this portfolio[5] (repayment of non-troubled loans). Non-

5 Had total loans in the ICO portfolio (the denominator of the ratio) remained constant in 2023, the share of NPLs would have risen by 2.7 pp to 9.7% in December.

performing loans in both housing and consumer credit increased (by 6.9% and 2.8%, respectively), with the NPL ratio rising by 0.3 pp to 2.4% in the former case and remaining at 4.4% in the latter.

Stage 2 loans[6] increased in 2023, changing the downward trend that started after the pandemic. For the resident private sector as a whole, these loans increased by 3.2%, compared with a 12.2% decrease a year earlier. Among NFCs and sole proprietors Stage 2 loans declined by 1.6% year-on-year (-22.4% in 2022) owing to the performance of SMEs (-5.4%). At large firms they rose by 4.1%. Stage 2 loans increased by 9.5% for households, especially in consumption (23.6%). The rate of change in loans for house purchase was slightly more moderate (7.8%). The share of Stage 2 loans stood at 7.6% (0.5 pp more than in 2022), increasing in both the corporate sectors (0.4 pp, to 10.1%) and households (0.6 pp, to 6.1%).

Other troubled assets (refinancings and foreclosures) followed the trend observed in 2022. Forborne loans fell by 16.8% year-on-year (up 0.3 pp on 2022), with a notable decline in non-financial corporations and sole proprietors (down by 21.9%, 10 pp up on the previous year). The decline in households was 9.6%, down 14.2 pp. Foreclosed assets stood at €15.9 billion in December 2023, after having fallen by almost 20% over the past year. This decline was in addition to the decreases recorded in recent years.

Lending abroad increased by 6.2% over the course of 2023, in contrast to the contraction seen in Spain. Lending by Spanish banks decreased in the United Kingdom and Türkiye. In the former, which accounts for over a quarter of Spanish banks' foreign business, lending contracted by 5%, despite the slight appreciation of the pound sterling. In Türkiye, the exposure in euro fell by only 2.4% year-on-year, despite the sharp depreciation of its currency in 2023. In the other jurisdictions relevant to Spanish banking, credit increased. In Mexico, lending grew by 20.1% in euro terms, in part owing to the notable appreciation of the peso against the euro. In the United States it grew by 1.8% year-on-year, despite the depreciation of the US dollar, while in Brazil the appreciation of the real contributed to a 10.8% increase in lending valued in euro.

The NPL ratio for business abroad increased, albeit unevenly across jurisdictions (see Chart 3.1.2.2). The NPL ratio for credit to the resident private sector in the United States rose notably (by 1.4 pp, to 4.9%) owing to the more than 40% increase in NPLs. Other geographical areas saw no notable changes in their NPL ratio, except for Türkiye, where it declined by 1.8 pp (to 4.6%), owing to the strong performance of the business portfolio.

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

Financing conditions and liquidity

In the setting of the Eurosystem's balance sheet reduction, debt issuance by Spanish banks increased significantly in 2023. Its cost also increased, albeit less so than in the previous year. The volume of debt issued in 2023 grew by nearly 50% compared with 2022, owing to the need to replace part of the financing from the Eurosystem and to meet the regulatory requirements relating to resolution. In the wake of the banking market turmoil of March 2023, the subordinated debt markets (Tier 2 and contingent convertible bonds) recovered their activity in the final stretch of the year. The cost of senior debt and senior non-preferred debt rose from 2.4% and 3.4% in December 2022 to nearly 3.9% and 4.9%, respectively, at end December 2023.

The pass-through of the policy interest rate hikes to lending rates was greater than to deposit rates, such that the higher interest income offset the increase in Spanish banks' financing costs. In 2023 this cost represented, in consolidated terms, 2.5% of total average assets, rising by 1.3 pp and 2 pp in relation to cost in 2022 and 2021, respectively. This higher cost was broad-based across different sources of funding, in particular the contribution of private sector deposits, owing to their predominant position in bank funding and despite unit costs remaining low. Interest income on bank assets grew more (by 1.6 pp and 2.6 pp, compared with 2022 and 2021, respectively) to stand at 4.8% of total average assets in 2023, which offset the higher cost of funding and significantly raised banks' net interest income. By asset category, income on loans to the non-financial sector grew the most (0.9 pp on assets) followed by income from central banks and other assets (0.3 pp) (see Chart 3.1.3.1).

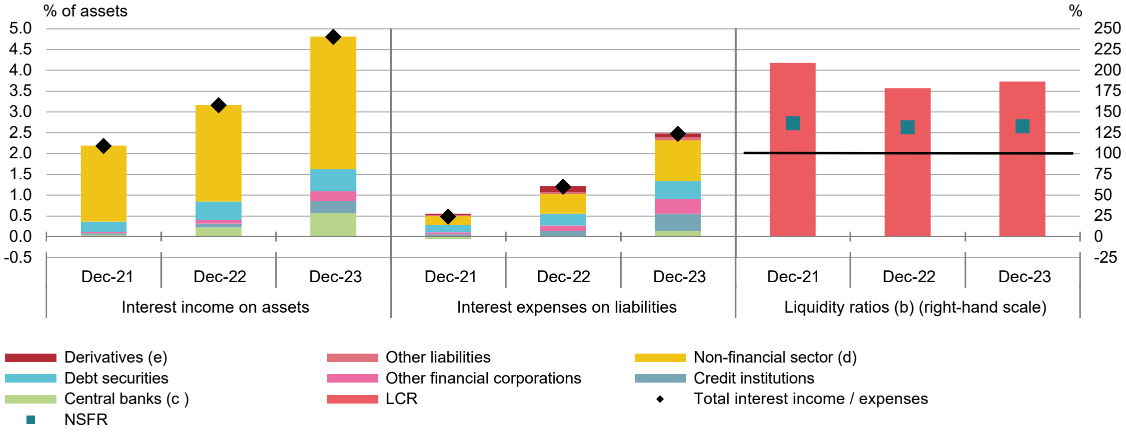
Spanish banks' cost of equity increased by 0.2 pp year-on-year, to around 9% in December 2023. Although there is much uncertainty surrounding the estimation of this cost,[7] its containment in 2023 is also expected to have helped mitigate the increase in the cost of its liabilities.

In 2023 the shift from sight deposits to term deposits increased on the back of the improvement in the average rates offered for the latter, which remained at moderate levels. The share of households' and NFCs' term deposits increased by 7 pp in 2023, standing at 14.6% of the total at December 2023, still far from the levels of nearly 50% prior to the period of quantitative easing, when interest rates stood at around 0%. The average interest rate paid by households' (sight and term) deposits reached 0.4% at December 2023, compared with 0.1% a year earlier. In the case of NFC's deposits, the average rate was 1.1% (vs. 0.2% at December 2022). Despite the expected moderation in monetary policy rates for 2024, some upward movement in the cost of bank deposits can still be expected, as their average interest rates

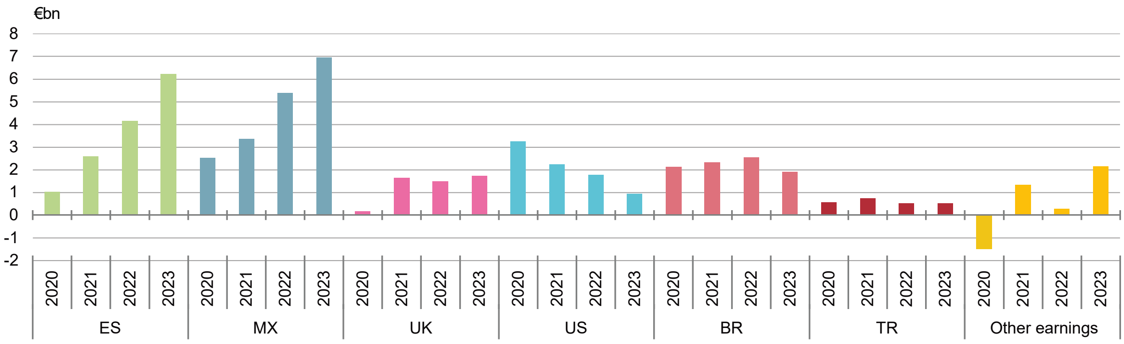
7 Cost of equity is unobservable and its estimation may vary significantly depending on the model used. See Luis Fernández Lafuerza and Javier Mencía. (2021). *"Estimating the cost of equity for financial institutions"*, Financial Stability Review - Banco de España, 40, Spring, pp. 49-66.

Chart 3.1.3 Developments in the cost of funding, liquidity ratios and profitability by geographical area

1 Interest income and expenses on funding and liquidity coverage and net stable funding ratios (a)



2 Geographical distribution of profit attributed to the parent, excluding extraordinary profit of banks with significant international activity (f)



SOURCES: Banco de España and banks' financial reporting.

a Interest income considers net income from interest associated with loans (disaggregated by counterparty), investments debt securities and other assets. Interest expenses consider net expenses associated with deposits (disaggregated by counterparty) debt securities issued, other bank liabilities, and trading and interest rate coverage derivatives.
b The pink bars show the LCR, which is defined as the ratio between a bank's unencumbered assets and potential net liquidity outflows during a 30 calendar-day stress. The turquoise market depicts the NSFR, which is defined as the ratio of a bank's available stable funding to its required stable funding for a period of one year. The black line denotes a level of 100%, above which banks hold sufficient liquid assets to cover potential liquidity outflows in a stress scenario (LCR) and have sufficient stable funding to satisfy their financing needs over one year, both in normal conditions and in a stress scenario (NSFR).
c The "Central banks" category includes, for income associated with assets, the income deriving from central banks' loans and debt securities and other net interest income classified for accounting purposes as "Other assets". The latter comprise, but do not allow for a breakdown of, interest on cash balances at central banks, as they also include other less important items such as cash-related interest, non-current assets and disposable groups of assets held for sale, net income on assets from defined contributions, etc.
d Includes household deposits and non-profit institutions serving households, NFCs and sole proprietors and general government.
e Interest expenses associated with derivatives include expenses less income from trading and interest rate coverage derivatives.
f Among the banks with significant international activity, this group includes the three in which such activity is more important and more extended in time, and non-recurring items in the period considered are excluded. The category 'Other earnings' includes the results of the banks' corporate centres.

remain significantly below policy rates and have so far lagged behind the lending rates. In addition, the flow of sight deposits towards longer maturities, as well as to other higher-yielding investment options, could continue.

Despite the contraction in the Eurosystem's balance sheet and the increase in funding costs, banks maintained high liquidity levels, with regulatory

ratios at end-2023 being slightly higher than a year earlier. The aggregate liquidity coverage ratio for Spanish banks as a whole stood at 186.3% at December 2023, nearly 8 pp higher than a year earlier. Meanwhile, the net stable funding ratio stood at 133%, 1.6 pp higher than at end-2022. These figures, well above the regulatory minimum (100%), place banks in a sound liquidity position to address in the short and medium term potential outflows of resources in the face of financial stress scenarios (see Chart 3.1.3.1).

Profitability

The significant increase in net interest income fuelled the improvement in the Spanish banking sector's profitability in 2023. Consolidated net profit in the sector amounted to €32,470 million, an increase of nearly 28% on the previous year and bringing the return on assets (ROA) to 0.79% (vs. 0.63% in 2022). Profit improved mainly on account of the increase in net interest income (22.4%), owing to the asymmetric pass-through of higher reference interest rates (to a greater extent in lending than in deposits), especially in the case of exposures in Spain, which has led to wider unit margins.

Profit improved both in Spain and in the business abroad of the main banks with an international presence. The most significant boost to business abroad came from Mexico (around 29% year-on-year), which, together with the growth in the United Kingdom and Türkiye, helped offset the fall in profits in Brazil and the United States (see Chart 3.1.3.2). Without taking into account the "other income" category, which includes items such as banks' corporate centres, profit in Spain accounted for 34% of the total profits of the main banks with an international presence.

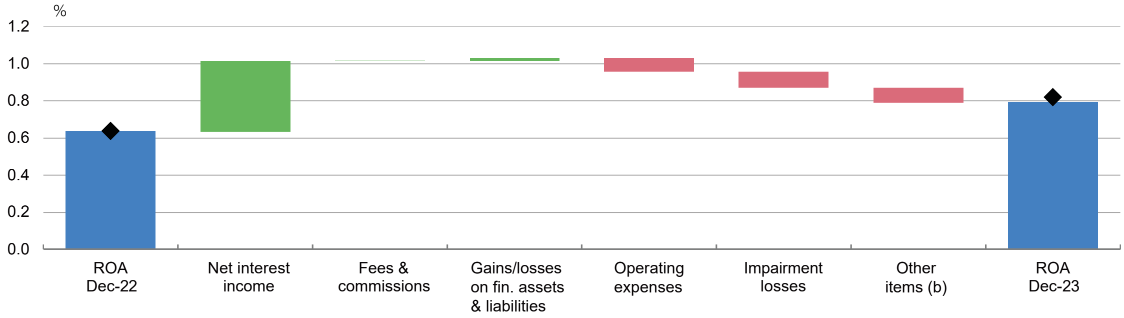
The aforementioned growth in net interest income helped offset the increases in operating expenses and impairment losses. Net fees and commissions remained relatively stable in 2023 (up 2.5%), while operating expenses rose by 8% and impairment losses by 22.9% (see Chart 3.1.4.1). The latter increased mainly in international business, but also in business in Spain. Although impairment losses remain contained, a potential increase in the future (due to the drag on economic activity or the persistence of relatively high rates), together with the reduction or stabilisation of net interest income, might lead to lower profitability over the course of 2024.

Solvency

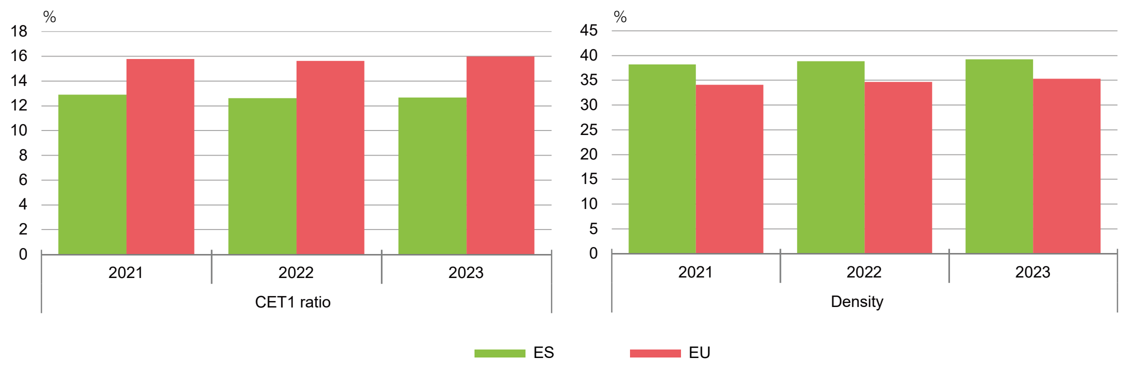
The CET1 ratio rose by 17 bp in 2023, to 13.2%. This slight increase was due to the 5% increase in CET1 capital (the numerator of the ratio), which was higher than the 3.7% increase in risk-weighted assets (RWAs, the denominator of the ratio). In turn, this negative contribution by RWAs was due primarily to the annual growth of 2.2% in total assets in 2023 and, to a lesser extent, to the increase (55 basis points (bp)) in asset density over the same period. This greater density of

Chart 3.1.4 **Bank profitability and solvency**

1 Breakdown of the change in profit. Net consolidated profit as a % of ATA (a)



2 European comparison of the CET1 ratio and asset density. Consolidated data. 2021-2023 (c)



SOURCE: Banco de España.

a The red (green) bars denote a negative (positive) contribution by the corresponding item to the change in consolidated profit at December 2023 compared with December 2022. The black diamonds show the ROA excluding extraordinary profit in 2022 deriving from the office purchases by one bank (-€0.2 billion) and the impact of the temporary 2023 levy on banks in 2023 (-€1.3 billion).
b IIncludes, among other items, the extraordinary profit referred to in note a above.
c La densidad de activos se define como el cociente entre los activos ponderados por riesgo y los activos totales.

the RWAs can be attributed to the fact that assets with lower weightings (such as central bank or government-backed deposits) account for a smaller share of the total, and to an increase in risk in some portfolios.

Despite the increase in the CET1 ratio, the distance to the European average increased over the last year. According to European Banking Authority (EBA) data, the distance between the CET1 ratio for the main Spanish banks and that of other European banks increased from 3 pp at end-2022 to 3.3 pp at end-2023 (see Chart 3.1.4.2).[8] Part of this difference is explained by the higher asset density of Spanish banks, as Chart 3.1.4.2 shows. This could be related, at least in part, with Spanish banks' lesser use of internal models. In recent years, this density has been around 4 pp higher for Spanish banks. Asset densities have been on a recent upward trend in both cases.

8 The difference between the aforementioned CET1 ratio figure for Spain and that shown in the chart is due to the fact that the figure in the text refers to the total number of deposit institutions, while the figure in the chart refers to the sample of the main banks (representing more than 90% of the system's total consolidated assets) used by the EBA.

Macroprudential analysis and measures

In 2023 the Banco de España held the countercyclical capital buffer (CCyB)[9] rate applicable to credit exposures in Spain at the minimum level of 0%. Although Spain's GDP fully recovered the deterioration accumulated during the pandemic and stood above pre-pandemic levels, the Banco de España maintained its macroprudential policy stance. According to the framework in place in 2023 for setting the CCyB, this buffer would only be activated if a high level of cyclical risks were identified, a situation that did not arise during the year. In addition, the environment continued to show much uncertainty owing to the geopolitical conflicts and tighter financial conditions.

The Banco de España's decisions to hold the CCyB rate at 0% in 2023 were guided by developments in a set of macro-financial indicators. According to the framework in place in 2023 for setting the CCyB, it would only be activated if a high level of cyclical risk were identified. The main benchmark indicator used is the credit-to-GDP gap, which measures the distance between the economy's aggregate indebtedness (credit-to-GDP ratio) and its long-term equilibrium trend.[10] This indicator remained on a downward trajectory throughout 2023, reaching negative values and, therefore, remaining well below the 2 pp benchmark threshold that signals the possible existence of substantial imbalances in the credit cycle (see Chart 3.1.5).[11] The recovery in economic activity and the slower growth of credit helped correct the imbalances caused by the pandemic on this indicator, which slowed its downward trend at end-2023 mainly owing to an easing in GDP growth.

CCyB decision-making is also informed by changes in other indicators, which display a cyclical position closer to equilibrium values. Specifically, the indicator known as the "output gap", which measures the distance between actual growth and the level that could be reached without increasing inflation, stood very close to equilibrium in 2023 and turned positive by the end of the year (see Chart 3.1.5). Other complementary indicators include real estate sector price imbalances,[12] which held at values close to equilibrium but have rebounded in 2023 H2, making it necessary to closely monitor the real estate market over the coming quarters.

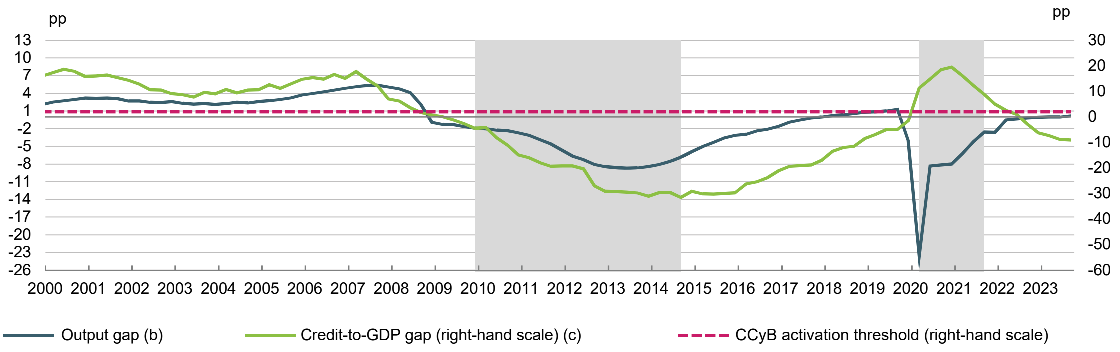
9 See the macroprudential tools section on the Banco de España's website, with the relevant methodological information for setting the CCyB that underlies the measures announced using this instrument.

10 Calculated using a one-sided Hodrick-Prescott statistical filter.

11 The decision to hold the CCyB rate at 0% was also backed by the changes in the credit-to-GDP gap calculated in accordance with the technical guidelines of the Basel Committee on Banking Supervision, using a smoothing parameter that is higher than that of the Banco de España (400,000 instead of 25,000).

12 The set of quantitative indicators guiding decisions on the CCyB includes indicators of credit imbalances, real estate sector price imbalances, debt servicing, external imbalances and the macroeconomic environment. Christian Castro, Ángel Estrada and Jorge Martínez-Pagés. (2016). *"The Countercyclical Capital Buffer in Spain: An Analysis of Key Guiding Indicators"*. Working Papers - Banco de España, 1601. For a historical perspective on the cyclical performance of bank lending in Spain, see Mikel Bedayo, Ángel Estrada and Jesús Saurina. (2018). "Bank Capital, Lending Booms, and Busts.Evidence from Spain in the last 150 years", Working Papers - Banco de España, 1847.

Chart 3.1.5 Output gap and credit-to-GDP gap, 2000-2023 (a)



SOURCES: INE and Banco de España.

a The shaded areas denote two crisis periods idenitified in Spain from 2009: the last systemic banking crisis (2009 Q1 to 2013 Q4) and the economic crisis triggered by COVID-19 (2020 Q1 to 2021 Q4). The horizontal dotted line denotes the CCyB activation threshold equal to 2 pp of the credit-to-GDP gap.

b The output gap represents the percentage difference between recorded GDP and its potential value. Values calculated at 2010 constant prices (see Pilar Cuadrado and Enrique Moral-Benito. (2016). "Potential growth of the Spanish economy". Occasional Papers, 1603, Banco de España. https://repositorio.bde.es/bitstream/123456789/6355/1/do1603e.pdf).

c The credit-to-GDP gap is calculated as the percentage point difference between the ratio recorded and its long-run trend calculated using a one-sided Hodrick-Prescott filter with a smoothing parameter equal to 25,000. This value fits the financial cycles historically observed in Spain (See Jorge Galán (2019). "Measuring credit-to-GDP gaps. The Hodrick-Prescott filter revisited". Occasional Papers, 1906, Banco de España. https://doi.org/10.2139/ssrn.3384613)

In 2023 the Banco de España conducted the annual review of the list of Spain's systemically important credit institutions. The Banco de España identifies "global systemically important institutions" (G-SIIs) and domestic systemically important institutions, dubbed "other systemically important institutions" (O-SIIs), based on objective criteria that take into account institutions' size and business model.[13] Each institution identified must meet an additional capital requirement to strengthen its resilience, mitigate the possible adverse effects on the global or domestic financial system and encourage more prudent risk-taking.

In 2023 the Banco de España again identified one G-SII and four O-SIIs, and revised upwards the macroprudential capital buffers of two institutions. In September 2023 the Banco de España announced[14] the designation, in 2024, of four O-SIIs with their associated macroprudential capital buffers, and the identification of one G-SII with its corresponding requirement for 2025 was announced in December 2023.[15] The buffers applicable to systemic institutions in 2023 (see Table 3.1.1) had already been announced in 2021 (G-SIIs) and 2022 (O-SIIs). The minimum capital buffers required in 2024 were raised for two of the four institutions designated as O-SIIs as a result of the ECB's revision[16] of its floor

13 Specifically, indicators are used that relate to: balance sheet size, interconnectedness with the banking and non-banking financial system, substitutability of the services provided by the institution, complexity of activities, and volume of cross-border activity. Similar indicators are used in the methodologies for identifying G-SIIs and O-SIIs.

14 See the press release "The Banco de España updates the list of other systemically important institutions and sets their macroprudential capital buffer rates for 2024", and the Banco de España blog post "The Banco de España raises the capital buffers for systemic banks", both published on 29 de September 2023.

15 See Banco de España press release of 14 December 2023.

16 See ECB "Governing Council statement on macroprudential policies" of 21 December 2022.

Table 3.1.1 Capital buffers for systemically important institutions

LEI code (a)	Institution	Designation (b)	Capital buffer requirement in 2023 (%)	Capital buffer requirement in 2024 (%)
5493006QMFDDMYWIAM13	Banco Santander, SA	G-SII and O-SII	1.00	1.25
K8MS7FD7N5Z2WQ51AZ71	Banco Bilbao Vizcaya Argentaria, SA	O-SII	0.75	1.00
7CUNS533WID6K7DGFI87	CaixaBank, SA	O-SII	0.50	0.50
SI5RG2M0WQQLZCXKRM20	Banco de Sabadell, SA	O-SII	0.25	0.25

SOURCE: Banco de España.

a Legal Entity Identifier.
b G-SII refers to global systemically important institutions; O-SII to other systemically important institutions.

Table 3.1.2 Comparison of ECB and Banco de España methodological frameworks for setting capital buffers for O-SIIs

	ECB revised framework		Banco de España revised framework	
Bucket	Score (bp)	Minimum capital buffer rate (%)	Score (bp)	Minimum capital buffer rate (%)
1	Below 750	0.25	Below 750	0.25
2	750-1,299	0.50	750-1,299	0.50
3	1,300-1,949	0.75	1,300-1,949	0.75
4	1,950-2,699	1.00	1,950-2,699	1.00
5	2,700-4,449	1.25	2,700-4,449	1.25
6	Over 4,450	1.50	4,450-5,500	1.50
7	-	-	Over 5,500	1.75

SOURCES: ECB and Banco de España.

methodology for assessing capital buffers for O-SIIs, approved in December 2022 and effective from 1 January 2024. In this respect, AMCESFI issued a favourable Opinion[17] on the new methodology used. The revised framework introduced a more stringent calibration for higher scored institutions than under the previous arrangements, with the O-SII minimum buffer rates ranging between 0.25% and 1.5% (depending on the score obtained), compared with the previous requirements of between 0.25% and 1%. As a result of these higher minimum buffer rates set by the ECB, the Banco de España revised its own methodology for determining O-SII buffer rates accordingly.[18]

17 See "AMCESFI Opinion on the macroprudential measure by the Banco de España on other systemically important institutions (O-SIIs) for 2024" of 29 September 2023.

18 See Table 1 of Box 3.2 of the Banco de España's Financial Stability Report. Autumn 2023.

3.2 Securities, commodities and foreign exchange markets

Securities markets

The performance of equity markets in Spain in 2023 was influenced by the ECB's interest rate decisions and expectations of a change in its monetary policy, as well as, to a lesser extent, by the slowdown in economic growth in Europe. Unlike 2022, when most equity markets recorded losses, the markets performed well in 2023 (the IBEX 35 appreciated by 22.8%). The Spanish index posted the strongest growth among the major euro area markets, most of which reached their all-time highs. The relatively better performance of the Spanish index arose from the greater weight of the financing sector, as well as the positive performance of the consumer goods and services sector (which performed relatively better than other areas) and of corporate earnings. However, it was insufficient to close the profitability gap that had opened up with its European peers in previous years.

Volatility levels in the Spanish stock market and in the main international markets declined significantly to low values.[19] There was only a temporary spike between April and March 2023, associated with the turmoil that emerged from the situation of certain financial institutions in the United States and Switzerland. Liquidity conditions[20] also improved slightly over the year, benefiting from low volatility levels which remained satisfactory even in times of heightened uncertainty. Similarly, issuance activity declined sharply, to stand at its lowest level in over a decade; indeed, no new companies debuted on the stock market.[21]

Trading of Spanish equities decreased in 2023 (by 14.6%), to €630 million, its lowest figure in nearly 20 years. Although the fall in trading affected the Spanish regulated market and other markets and competing trading venues, the process of delocalising trading continues, albeit less intensely. This shift in trading, which started later in Spain than in other euro area countries, has progressed gradually, leaving the distribution of trading between the market of origin and competing centres at medium levels compared with other European securities markets. Trading on the Spanish regulated market decreased by 17.6% to €290 million, while trading on other competing trading venues fell by 11.9%, to €340 million, raising the latter's market share to 53.6% (52% in 2022).

19 In the case of the IBEX 35, the annual average of this indicator was 13.1%, below its level in 2022 (18.4%). At year-end, it stood below 10%.

20 Liquidity, estimated on the basis of the bid-ask spread, stood on average in 2023 at 0.063%, below the indicator's historic average (0.088%).

21 Only the alternative market BME Growth saw some buoyancy, with the admission of nine new companies (six growth-stage firms and three real estate investment companies (SOCIMIs)). In 2022 15 new companies were listed on this market (10 growth-stage firms and five SOCIMIs).

The ECB's tightening of monetary policy, with successive rate hikes until September 2023, drove both government and corporate debt asset yields upward over much of the year, peaking in October. This trend, which affected Spain and other European countries, was reversed in 2023 Q4 owing to a shift in the monetary policy, with interest rates cuts concentrated in the longer maturities. As a result, the yields on 10-year government bonds at end-2023 were around 3%, below the 3.66% posted at the start of the year and also below the yields for 1-year maturities (between 3.1% and 3.6%). The sovereign risk premium also decreased during the year, from 108 bp to 96 bp, as did the premiums for the private sub-sectors of the economy, which benefited from the acceleration of economic growth and the expected drop in interest rates.

The activity of Spanish issuers on the primary debt markets decreased by 8.3% in 2023 owing to the lower volume of issuance in Spain, which was largely offset by the increase in issues registered abroad. Fixed-income issuance[22] by the private sector and registered with the National Securities Market Commission (CNMV) decreased by 23%, to €45,445 million, while corporate commercial paper admissions to listing stood at €25,705 million,[23] down 35%. This latter decline suggests that the trend of delocalising issues of this kind from abroad to Spain may have come to a halt. Also, issuances abroad grew by 19% to €134,222 million, their historical high, thanks to the significant recovery of long-term issuance. ESG bond issuance (those with environmental, social and governance features) by the private sector declined for the first time in recent years to over €13,300 million,[24] of which nearly €11 million were green bonds.

The market risk[25] of debt assets moderated notably over the year, especially in its final stretch, as the monetary policy tightening process had concluded and the possibility of the first interest rate cuts started to be discerned. This circumstance has extended to credit risk,[26] which could also benefit from a scenario of some momentum in activity and lower financial costs. Even so, the possibility remains that there is some degree of fragmentation among issuers depending on their credit ratings. Therefore, any shock originating in or spreading across the financial markets could lead to adjustments in the valuations of the different assets and trigger price corrections, which would be sharper for assets with higher associated risk levels, such as high-yield debt or subordinated debt.

The financial infrastructures for trading and post-trading securities domiciled in Spain carried out their activities in 2023 without significant incidents. The

22 Issues amounting to €9,537 million made by Sareb were also registered with the CNMV, but are considered Spanish government debt.

23 In addition to this amount, €15,162 million were admitted to trading on the alternative fixed-income market (MARF by its Spanish abbreviation), a 10% increase, of which €14,066 million relate to commercial paper issuance.

24 This figure represents more than 12% of Spanish issuers' long-term debt issues. General government issues of this type amounted to €3.9 billion in 2023.

25 Associated with the possibility of new interest rate hikes.

26 Assessed based on the average cost of credit default swaps of the different sectors.

CNMV closely monitored Credit Suisse during its liquidity crisis in March 2023 to verify that it was promptly meeting its obligations to BME Clearing. With the aim of reducing counterparty risk, BME Clearing activated its risk management mechanisms to address circumstances of this kind. The bank was finally absorbed by the UBS Group, which is also a clearing member of BME Clearing.

Also, in 2021, as it does each year, the CNMV conducted the annual exercises to review compliance with EU legal requirements in relation to the BME Group's two systemic infrastructures, BME Clearing and Iberclear. The supervisory activities included, among others, an in-depth analysis of the outsourcing agreements at SIX Group, in coordination with the Swiss Financial Market Supervisory Authority (FINMA).

In addition, as regards the central counterparty clearing house (CCP), the CNMV conducted a review of the concentration risk management framework and of the methodology applied in the non-compliance simulation exercises. The CNMV also approved BME Clearing's recovery plan and the inclusion of products linked to crypto-assets as part its clearing activities. This authorisation was the result of the analysis conducted by the CNMV, in cooperation with the European Securities and Markets Authority (ESMA) and the CCP's college of supervisors. As regards BME Clearing's risk figures, in 2023 the initial collateral requirements were reduced by 25% with respect to their average value in 2022. The most noteworthy reduction was in the energy sector (-56%), as a result of the notable reduction in prices and volatilities in the electricity and natural gas contracts cleared at BME Clearing.

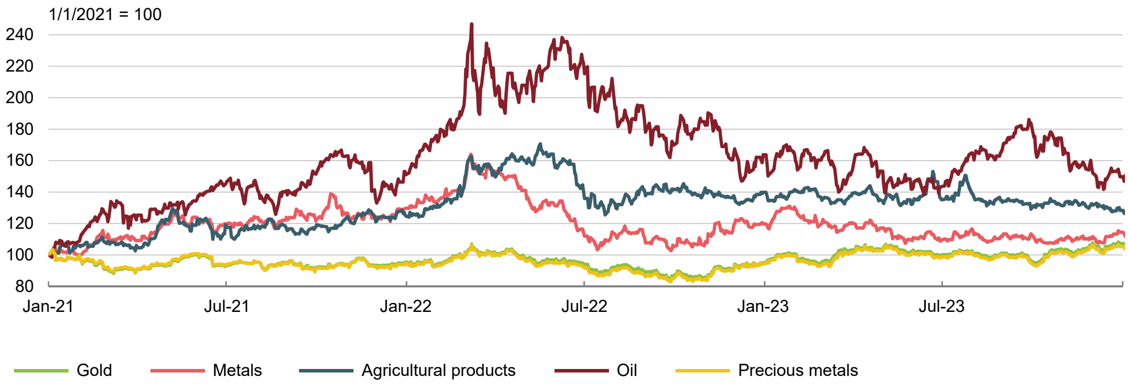
As regards the central depository, Iberclear, the CSDR Refit came into force in January 2023.[27] This Regulation introduces amendments to the settlement discipline regime. It also requires ESMA to draw up a report for the European Parliament and the Council on the assessment of the possible shortening of the settlement cycle, its suitability, costs and benefits, risks and calendar assuming that no significant incidents arise. According to Iberclear data, under the penalty regime there was a notable decline in the number of penalties and of 33% in the total amount thereof in 2023.

Commodities and foreign exchange markets

With the war in Ukraine stalling, commodity prices gradually eased in 2023 once the supply problems and bottlenecks which arose in the wake of the COVID-19 pandemic had been overcome. Unlike in 2022, the increase in oil

27 Regulation (EU) 2023/2845 of the European Parliament and of the Council amending Regulation (EU) No 909/2014 as regards settlement discipline, cross-border provision of services, supervisory cooperation, provision of banking-type ancillary services and requirements for third-country central securities depositories and amending Regulation (EU) No 236/2012.

Chart 3.2.1 Changes in the prices of the main commodities



SOURCE: Refinitiv Datastream.
Note: Precious metals: gold, silver and platinum; metals: aluminium, copper, zinc, nickel and lead.

supply, coupled with a slightly more moderate demand on the back of the economic slowdown led to falls in energy commodity prices. This pattern intensified in the case of electricity and gas, with their prices falling to 2021 levels owing to weak European industrial demand. Also, agricultural commodities, which had risen in tandem with energy costs, displayed some volatility in 2023 H1, associated with adverse weather conditions and a return to the levels prior to Ukraine's invasion at end-2023. For their part, industrial commodity prices fell moderately as a result of the weakness in some industrial sectors and the Asian economy, while precious metal prices posted mild increases associated with their safe-haven status.

The main currencies, including the euro, appreciated against the US dollar in 2023. The euro appreciated by 3.64% against the United states dollar (USD) in 2023, from an exchange rate of 1.0720 USD/EUR in early 2023 to 1.1064 USD/EUR at year-end. The maximum exchange rate was reached in July 2023 (1.1239 USD/EUR) and the minimum in October 2023 (1.0462 USD/EUR), standing above parity throughout the year. The pound sterling (GBP) appreciated by 5.70% against the dollar, from 1.2047 USD/GBP to 1.2763 USD/GBP at year-end, peaking in June (1.3114 USD/GBP). The Brazilian real also appreciated slightly in 2023 and the Japanese yen was the only major currency that continued to depreciate against the dollar (-7.87%).

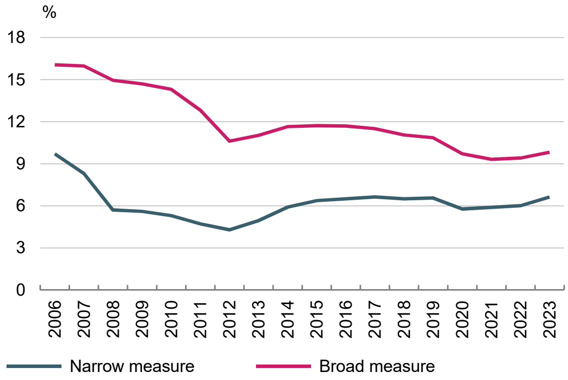
3.3 Non-bank financial intermediation

The volume of financial assets of entities related to non-bank financial intermediation (NBFI) in Spain[28] – i.e. considering all financial institutions

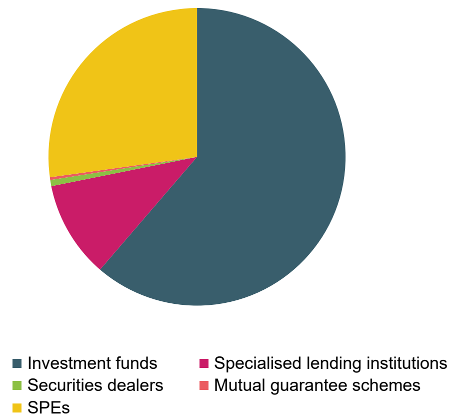
28 The CNMV publishes a detailed report on this topic on an annual basis *("Non-bank financial intermediation in Spain").*

Chart 3.3.1 Non-bank financial intermediation (2023)

1 Share of NBFI in the financial system



2 Economic functions (broad measure)



SOURCES: CNMV and Banco de España.

except banking institutions – stood at €1.46 trillion in 2023 (5% more than in 2022). The financial assets of entities comprising the narrow measure of NBFI amounted to €348 billion, a substantial increase of 11.5% vis-à-vis 2022. As a result, the significance of NBFI in the financial system as a whole grew by 0.6 pp, to stand at 6.6%, as the other segments generally increased more moderately. For instance, bank assets grew by 2.36%, while those of insurance companies did so by 8.7%. Despite this pick-up, the significance of NBFI in Spain continues to be somewhat lower than that observed in most EU countries, where its share in the total financial system is, on average, 13.9%.[29]

The narrow definition of NBFI is obtained from the financial assets of entities that fit into one of the five economic functions defined by the FSB,[30] whose activity can generate risks similar to banking risks. As mentioned above, this narrow measure amounted to €348 billion in 2023.[31] Of this amount, 91% related

29 This figure relates to the average for the EU countries analysed in the latest report published by the Financial Stability Board (FSB) on 2022 data. According to this report, the narrow NBFI measure in the advanced economies stood, in aggregate terms, at 14% of the total financial system, compared with 13.2% in the emerging market economies. See FSB (2023) *"Global Monitoring Report on Non-Bank Financial Intermediation 2023"* of 18 December 2023 and ESRB (2023) *"EU Non-bank Financial Intermediation Risk Monitor 2023"*, published in June 2023.

30 These functions are: collective investment vehicles with features that make them susceptible to runs (EF1), loan provision that is typically dependent on short-term funding (EF2), intermediation of market activities that is dependent on short-term funding (EF3), entities that facilitate the creation of credit (EF4) and securitisation-based credit intermediation for funding financial institutions (EF5). See FSB (2013) *"Policy Framework for Strengthening Oversight and Regulation of Shadow Banking Entities"* of 29 August 2013.

31 The narrow measure does not include the assets of entities that are consolidated in banking groups, even if they meet the definition of one of the five economic functions. Without this exclusion, total assets would amount to €515 billion.

to EF1 assets,[32] which are the most significant ones in Spain within NBFI and which relate to certain types of collective investment undertakings (CIUs). 6% of the assets belonged to EF5 entities, the second most significant function, which comprises securitisations. The remaining 3% was distributed among the three remaining economic functions.[33]

Considering the aforementioned share of their assets, the risks to financial stability associated with NBFI entities are concentrated in investment funds[34] and securitisations. In the case of investment funds, one of the biggest risks to financial stability is associated with the possibility that, in certain situations of stress, these entities may be unable to cope with a significant increase in their liquidity needs. These may stem from a sudden rise in the volume of redemption requests by unit-holders or from changes in asset prices when there is significant exposure to derivatives. Therefore, monitoring the liquidity conditions of funds' portfolios and their leverage (via derivatives) remains central to risk analysis at these entities. Moreover, it is also considered important to analyse in depth the fixed-income portfolio of these vehicles owing to the financial characteristics of these assets.[35] In the case of securitisations, it is important to assess their high level of interconnectedness with other parts of the financial system and the risk of maturity transformation, which in Spain does not yet point to any significant vulnerability.[36]

Estimation of the leverage[37] of the EF1 investment funds shows that their exposure to market risk remains below the maximum permitted by legislation. Entities' leverage is assessed through the use of derivatives (indirect leverage), since borrowing (direct leverage) is highly restricted by regulations.[38] Thus, analysis of the CIUs belonging to the NBFI sector shows that the gross market risk exposure[39] amounted to 27.5% of their net assets at end-2023, lower

32 See previous footnote.

33 Looking at the entities that meet the definition of each of the different economic functions without excluding those that are consolidated in banking groups, the respective weights are markedly different. Thus, the share of EF1 would be 61%, while that of EF5 would be 27%.

34 NBFI comprises all financial CIUs, except equity investment funds. Of the vehicles belonging to the NBFI sector, at end-2023, 89.8% were harmonised, in terms of net assets (they complied with UCITS regulations), whereas the remaining 10.2% were not (alternative investment funds).

35 Owing to their characteristics, these assets involve credit risk and are directly affected by interest rate risk. In addition, their secondary markets may be less liquid at certain points in time.

36 In 2023 short-term assets and liabilities only accounted for 21.1% and 13.7%, respectively, of the total assets and liabilities in the balance sheet of securitisation special purpose entities, somewhat below the figures for 2022 (21.9% and 14.4%, respectively).

37 The assessment of leverage and liquidity is only carried out for investment funds belonging to the NBFI sector. Open-end investment companies and hedge funds, whose combined relative share in the total EF1 is only 6.4%, are also excluded. Investment funds are divided into mixed funds, fixed-income funds and money market funds, which account for 49.4%, 40.9% and 3.3%, respectively, of EF1.

38 Directive 2009/65/EC – the UCITS Directive – limits borrowing to no more than 10% of net assets to resolve temporary cash difficulties.

39 Gross leverage is calculated as the sum, in absolute terms, of the nominal amounts of derivative contracts; in other words, long position and short position amounts (both positive) are added.

than the 2022 figure (40%), while the net exposure[40] only amounted to 10.8%[41] of their net assets. The latter figure shows that Spanish investment fund leveraging was below the maximum permitted (100% of net assets) at end-2023.

The liquidity positions of Spanish investment funds remained satisfactory in 2023, with a slight improvement on the previous year. Liquidity risk assessment is particularly important in the case of these funds, given that the majority permit daily redemptions. The high-quality liquid assets (HQLA) ratio, which factors in both asset class and credit ratings when determining a portfolio's liquid assets,[42] stood at 55.5% for total NBFI funds (53.9% in 2022). This figure was 49.9% for mixed funds, 61.7% for fixed-income funds and 61.8% for money market funds. Thus, it can be seen that high-quality liquid assets accounted for more than 40% of the total at most of the investment funds, with only 15.9% of mixed funds and 6.2% of fixed-income funds (in net asset terms) posting a ratio below that threshold (see Chart 3.3.2).[43] However, there are investment funds, albeit a very small proportion, where liquid assets account for less than 20%: specifically, 0.7% of fixed-income funds and 0.9% of mixed funds, in terms of net assets (these percentages exceeded 2% in 2022).

A more detailed analysis of the assets in the NBFI investment funds' fixed-income portfolio reveals that credit quality was relatively high and the modified duration[44] moderate. Thus, at end-2023 91.7% of the value of the fixed-income portfolio had a credit rating of BBB or higher (investment grade), and around 20% had AA or AAA ratings. As shown in Chart 3.3.3.2, the value of investment grade assets ranged between 90.5% of mixed funds and 97.7% of money market funds. The modified duration for all investment funds at end-2023 was 1.9. This figure has decreased notably over the past two years as a result of the widespread rise in interest rates and, especially, in shorter terms.[45] Around

40 To determine net leverage the market value of the underlying asset (or its notional value where this is more conservative) is considered, adjusting for the delta in the case of options and implementing certain rules to offset long positions with short positions in the same underlying asset (netting) or in different underlying assets (hedging).

41 This figure has been calculated for all the funds that perform their calculations using the commitment approach, which serves to calculate exposure based on the conversion of all derivative contracts into their equivalent underlying asset positions and whose technical specifications are detailed in the "CESR's Guidelines on Risk Measurement and the Calculation of Global Exposure and Counterparty Risk for UCITS" (CESR/10-788). These funds accounted for 79.6% of the total. Net exposure would increase to 21.9% if the indirect exposure through investment in other CIUs were included in the estimation of leverage.

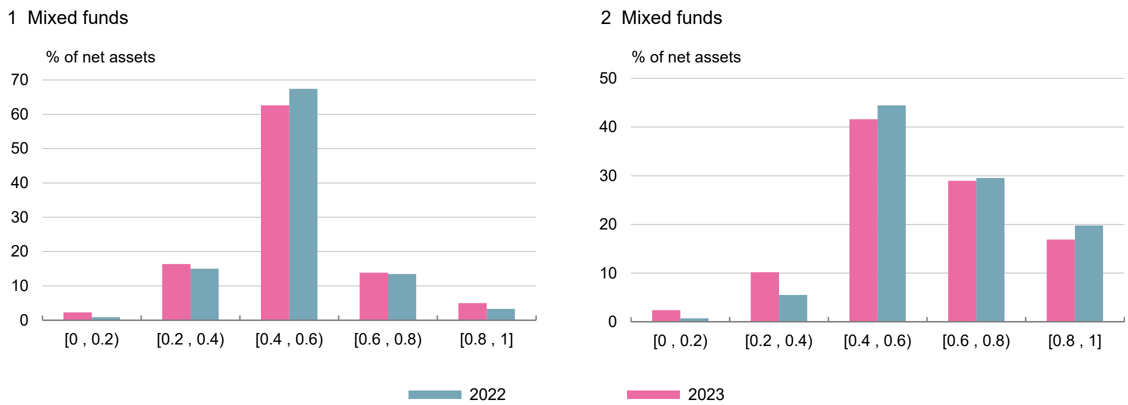
42 HQLA means total cash and deposits, 50% of the value of equity securities, and percentages of government debt, private fixed-income and securitisations that vary depending on their credit rating. The percentage of government debt deemed liquid ranges between 0% and 100%, with this figure ranging between 0% and 85% for corporate bonds and 0% and 65% for securitisations. See "Quantifying uncertainty in adverse liquidity scenarios for investment funds" (CNMV Bulletin, Quarter II 2020), by Javier Ojea. Moreover, to obtain a metric that is as precise as possible, the HQLA of CIUs in which Spanish funds invest have also been quantified, instead of considering this investment as zero liquidity.

43 All the money market funds, which are not included in Chart 3.3.2, had a percentage of liquidity assets of between 60% and 80%.

44 The modified duration measures the percentage change in the price of an asset in the event of a 100 bp interest hike.

45 In 2021 the modified duration was 2.7, compared with 2.3 in 2022.

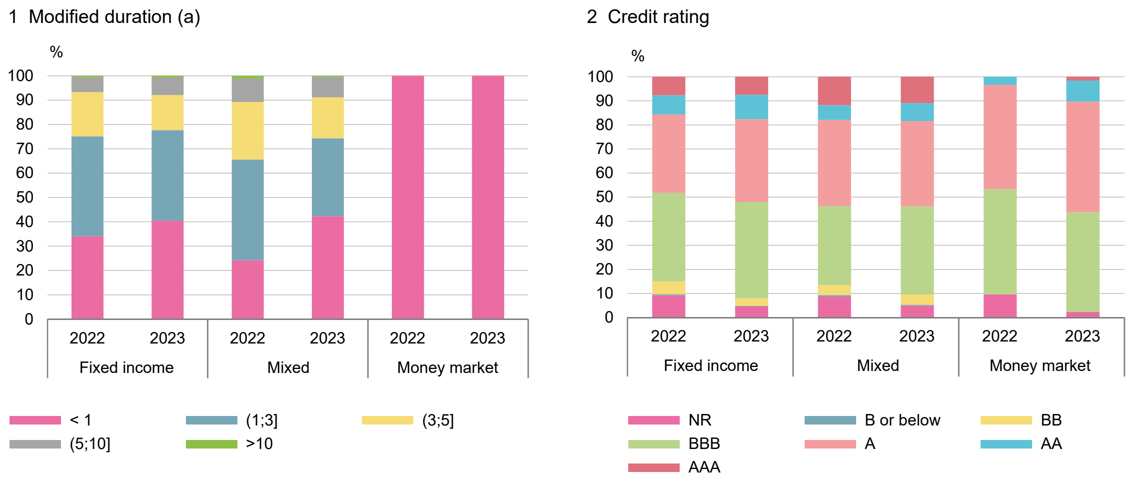
Chart 3.3.2 Liquidity positions of mixed and fixed-income funds (2023) (a)



SOURCE: CNMV.

a Distribution of funds according to their high-quality liquid assets (HQLA) ratio.

Chart 3.3.3 Analysis of investment funds' fixed-income portfolios (2023)



SOURCE: CNMV.

a Money market funds are excluded because the entire fixed-income portfolio has a duration of less than one year.

75% of the mixed and fixed-income funds (in net asset terms) had a modified duration below 3 years (see Chart 3.3.3.1).

In its analysis of liquidity risk management, the CNMV performs half-yearly stress tests on investment funds. These exercises simulate one (or several) market shocks and assess the resilience of investment funds. They are performed on UCITS and non-harmonised UCITS, in line with the methodology proposed by the ESMA (STRESI framework)[46] and subsequently

46 ESMA *"Stress simulation for investment funds"*, 5 September 2019.

broadened by the CNMV.[47] The results of the latest stress tests, with data at December 2023, which envisage different shock scenarios for the different fund categories, continue to show that the investment fund market is generally resilient to the scenarios considered. In the most extreme scenario simulated, which, depending on the segment, is 16 times more severe than that recorded in the worst week of March 2020, a total of 11 funds are identified as having potential liquidity problems for meeting the simulated increase in redemptions (1.7% of net assets in the sample). The 11 funds are high-yield corporate bond funds (34.8% of net assets in the category.

At international level, extensive work continued in assessing the risks that could arise or spread in the area of investment funds. Noteworthy was the analysis conducted by the European Systemic Risk Board (ESRB) to assess the risks of funds investing in inherently less liquid assets or in assets that may be illiquid in times of stress. Examples of this are funds that invest in corporate debt and real estate funds.[48] The analysis shows that these funds may have structural vulnerabilities arising from liquidity mismatch and the use of leverage. Therefore, it is noted that the resilience of these institutions can be enhanced by using certain tools that are already available in the regulatory framework, such as: (i) a better connection between a fund's redemption profile and its investment strategy, (ii) promotion of the use of anti-dilution liquidity management tools (LMTs) and (iii) improvement of the preparedness of funds leveraged for possible increases in their liquidity needs.

Also notable is the progress of the work on liquidity risk management carried out by working groups in the International Organization of Securities Commissions (IOSCO) and the FSB, in which the CNMV actively participated. IOSCO published Guidance on the use of anti-dilution LMTs, setting out the items to be taken into account in the design and use of these types of tools, which aim to pass on to subscribing or redeeming investors the transaction costs deriving from the purchase or sale of securities associated with such subscriptions or redemptions. In scenarios of crisis and high levels of redemptions these tools enable the cost of liquidity to be borne by redeeming investors, protecting those who remain in the fund and thus preventing large-scale redemptions from spiralling. For this reason, their use is considered to be particularly important to preserve financial stability. IOSCO's guidance seeks to contribute to greater and more consistent use among fund managers and across jurisdictions.

As regards the FSB, the CNMV participated in 2023 in the working group that revised the 2017 FSB Recommendations relating to liquidity mismatch in open-ended investment funds. The work, promoted by the FSB's Standing Committee on Supervisory and Regulatory Cooperation, was performed in parallel

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47 Javier Ojea-Ferreiro (2020) "Quantifyfing uncertainty in adverse liquidity scenarios for investment funds", CNMV Bulletin, Quarter II 2020.

48 See the report *"Issues note on policy options to address risks in corporate debt and real estate investment funds from a financial stability perspective"*, published by the ESRB in September 2023.

with the aforementioned IOSCO guidance on anti-dilution LMTs, with the aim of improving the liquidity management practices of open-ended funds. To this end, two main aspects were established: first, the classification of funds into three categories (based on the percentage of investment in very liquid, less liquid and illiquid assets) and the setting of a redemption frequency and use of tools depending on the asset liquidity profile. Also envisaged was the promotion of the use of liquidity management (especially anti-dilution) tools.

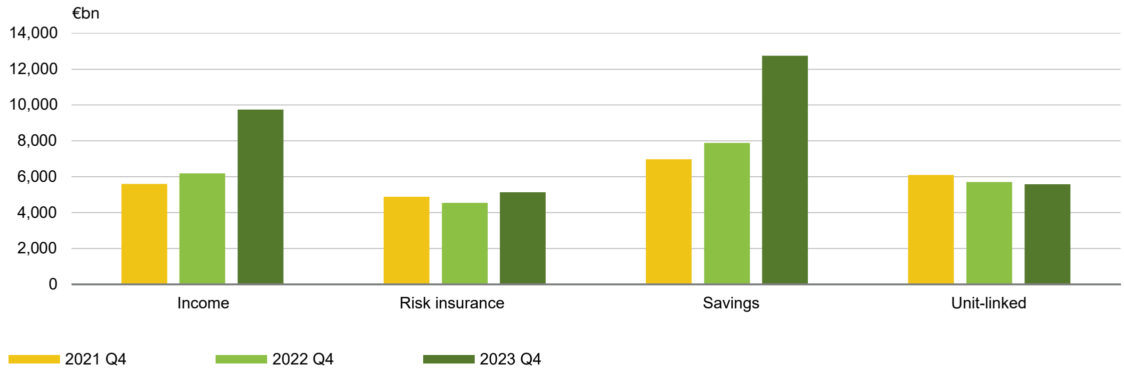
The two remaining lines of work for completing the effective implementation of the 2017 FSB Recommendations are under way. One of them refers to developing regulatory reporting requirements to enable the authorities to have data for monitoring liquidity risk in investment funds. In light of this, at end-2023 a working group was created that launched a pilot programme with the aim of comparing available data and identifying shortcomings. The other line of work refers to stress testing by the authorities to assess the resilience of investment funds in response to crisis scenarios and their interactions with the financial system. A workshop has been scheduled to share relevant experiences and methodologies.

3.4 Insurance undertakings and pension funds

The Spanish insurance sector has proven resilient despite the macro-financial challenges it faced and saw a very significant increase in the life insurance business. The sector was not immune to inflationary pressures and financial market uncertainty exacerbated by the current international geopolitical context. The Spanish insurance sector displays a comfortable solvency level, exceeding the regulatory minimum, and a positive solvency ratio trajectory, having risen from 232% in 2022 to 241% at end-2023. The life insurance business was characterised by an increase of around 36% in gross written premiums. Two aspects drove this substantial growth: (i) the rise in interest rates, which helped savings plans recover, and (ii) the channelling of savings to the insurance sector owing to the modest transmission of this interest rate increase to the remuneration of deposits. Saving was the main driver of the performance of life insurance (see Chart 3.4.1) and the main factor explaining the growth of turnover (measured through gross written premiums) as a percentage of GDP, which has increased from 4.8% in 2022 to 5.2% in 2023.

The wealth built up in pension funds (one of the instruments designed specifically for channelling retirement savings) posted positive growth in 2023. Following the decline observed in 2022, in 2023 there was a return to the positive trend of recent years. The increase was greater in individual and associated pension plans (up 8%) than in occupational plans (5.5%). This growth is due to the positive yields obtained on pension fund investments, mainly on the back of

Chart 3.4.1 Changes in life insurance



SOURCES: DGSFP and own calculations.

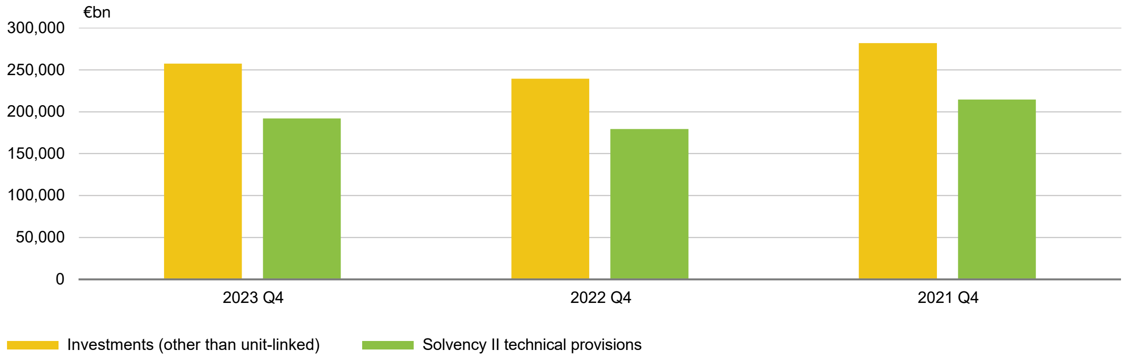
interest rate hikes. As regards occupational pension plans, following the approval of the regulatory implementation of the new simplified occupational pension plans, a growing number of participant accounts has been recorded. These have increased by almost 45,000, of which 25,000 are simplified occupational pension plans, showing that the above-mentioned reform has been welcomed.

In the area of occupational pension plans, in 2023 the European Insurance and Occupational Pensions Authority (EIOPA) developed a Risk Dashboard on Institutions for occupational retirement provisions (IORPs). The IORP Risk Dashboard aims to monitor and assess the situation of and changes in risks that may affect occupational schemes, with a view to maintaining financial stability and identifying the sector's potential vulnerabilities.

The new legal framework to promote occupational pension schemes was completed in 2023. The new regime was provided for by Law 12/2022 of 30 June 2022, promoting public occupational pension schemes through: (i) approval of Royal Decree 668/2023 of 18 July 2023, amending the pension scheme and pension fund Regulation which completes the regulatory implementation of the law and revises other aspects relating to investment, actuarial and other broader issues; and (ii) registration in the special administrative Registry of the Directorate General of Insurance and Pension Funds (DGSFP by its Spanish abbreviation) of the first 15 public occupational pension funds.

Higher inflation and the high interest rate environment were the two main factors impacting developments in the insurance business and in the identification of potential risks and vulnerabilities for financial stability. The change in sectoral own funds mainly stemmed from the change in technical provisions, which represent commitments to policyholders and are therefore connected to business under management, and the investments in which they materialise. The immediate consequence of the significant channelling of savings was the growth of both investments and technical provisions in the sector (see Chart 3.4.2). This very

Chart 3.4.2 Changes in investments and in technical provisions



SOURCES: DGSFP and own calculations.

substantial increase in business has largely mitigated the effects of the sharp rise in interest rates on the insurance sector's balance sheet in 2022.

Although inflation moderated over the course of 2023, its effects were still felt. Following 2022, a year strongly marked by the impact of inflation on the costs borne by insurers in non-life insurance, its effects were tempered by the upward revisions of insurance premiums to adapt them to inflation, by the subdued growth of costs and by the financial support provided by interest rate hikes. Thus, gross written premiums grew in 2023 by 7% and income from non-life insurance improved by approximately 3%.

The monitoring of liquidity risk gained relevance in the inflationary and rising interest rate environment.[49] The analyses conducted have evidenced the lack of systemicity of this risk which is largely mitigated in Spain by the existence of policy surrenders at market value in a significant number of insurance policies. Regulatory intervention by the Italian supervisory authority Istituto per la Vigilanza sulle Assicurazioni (with no effect in Spain) to place the life insurer Eurovita under temporary administration and to prohibit payments of surrenders to policy holders (i.e. early redemptions of policies due to their cancellation) emphasised the importance of the risks that the surge in interest rates can entail for life insurers' liquidity. This is why monitoring liquidity has largely focused on controlling policy surrender rates. This concern about policy surrenders is based on the potential effects on earnings and liquidity if insurers are forced to sell assets in response to early redemptions at depressed prices owing to a rise in interest rates. There are two elements that could influence how surrenders evolve: (i) a decline in policyholders' purchasing power in the new inflationary environment, and (ii) the potential search for products yielding higher returns than the existing products in light of the surge in interest rates. Given the different behaviour to be expected depending on the nature of the insurance (greater likelihood of surrenders in

49 The analysis of liquidity resulting from surrenders and collateral requirements has also been monitored by EIOPA in its Financial Stability Reports of June 2023 and December 2023.

savings plans less linked to retirement savings and less likelihood in income), the analyses carried out have taken into account the products' characteristics.

The macroprudential analysis performed evidences that there is no systemic risk in connection with surrenders. It is important to determine whether, in the current setting, there has been a sectoral trend in relation to surrenders and, if so, whether it can be linked to specific insurers that are especially significant from a systemic perspective. As expected, the macroprudential analysis conducted evidenced a different behaviour depending on the nature of the business, but, more importantly, the absence of systemic risk in relation to surrenders. This was because, although surrenders increased substantially, this increase was more than offset by the increase in premiums (nearly 2.5 times greater). Also noteworthy were the potentially greater liquidity needs caused by collateral requirements, in turn triggered by the rise in interest rates for certain types of derivatives. This is especially significant in light of the 2022 crisis in the United Kingdom relating to the defined benefit pension funds using liability-driven investment strategies. The results of the assessment showed that the impact was mostly immaterial in Spain due to, first, the scant weight of derivatives in the insurance sector and, second, their different nature, as derivatives held by Spanish insurers are different from those which triggered the crisis.

Uncertainty about the performance of the real estate sector in Europe led to heightened monitoring in 2023. The high interest rates and the possibility that there may be no immediate downward reversal thereof, raised the cost of real estate financing and may discourage investment in the sector. In the domestic commercial real estate sectors of EU countries, the slowdown in economic growth, coupled with the structural shift towards a reduced physical presence and more e-commerce were potential factors reducing demand. The insurance sector may be directly exposed to the real estate market through investments in properties or indirectly so through investments in shares of real estate companies, real estate funds, real estate risk in securitisations and mortgages or corporate debt and shares in real estate-related firms. Real estate exposure is low in the insurance sector, accounting for approximately 5.6% of total investments at end-2023 and remaining at around 5% in recent years. Direct exposure to real estate accounts for 3.7%, mainly in major cities – Madrid (56%) and Barcelona (19%). Direct exposure to office buildings and immovable property is very limited in the insurance sector, representing 2.5% of total investments, more than 92% of which was leased at end-2023, with this percentage remaining steady over the past few years. Both direct and indirect exposure of pension funds to the real estate sector is residual, accounting for 0.85% of total investments at end-2023.

The consolidation and concentration of investment positions in alternative assets can give rise to systemic risk with implications for financial stability and macroprudential oversight. The sustained period of low interest rates, the longer duration of some alternative assets and their ability to provide high returns and allow for greater diversification are key factors that can lead to more investment in assets of this kind by the insurance sector. However, these investments are not free of risks, the most significant being market or credit risk, liquidity risk and the risk arising from the complexity of their assessment. Although it is recognised that it is difficult to identify alternative/illiquid investments, the determination made on a best effort basis, following EIOPA rules, indicates that this phenomenon is largely insignificant. The results show the immateriality of this type of investment in the Spanish insurance sector. It accounts for 9.7% of total investments, the most important contributors being real estate (3.7%), structured financial assets (1.6%) and private debt (1.1%).

The objectives of channelling private finance towards the economy and boosting the green and digital transitions are considered highly significant from a macroprudential standpoint. Although regulation is only one of the elements underpinning the development of financial markets, it is indeed one of the most important ones. This development is promoted by the measures included in the retail investment strategy50 approved by the European Commission, which seek to empower retail investors to make investment decisions that are aligned with their needs and preferences, while ensuring they are treated fairly and duly protected.

Assessing digital transformation processes in the insurance and pension fund sector is one of the strategic areas of supervisory action. The insurance sector is currently undergoing a profound digital transformation. Digitalisation has very favourable consequences, mainly the reduction in costs, the increase in reliability and greater availability of information and traceability of actions, as well as the renewal of business models and the opening of new distribution channels. However, digitalisation also increases operational complexity and exposure to new risk types deriving from certain operational disruptions. The foregoing issues have led the DGSFP to include in its 2023-2025 supervisory priorities the assessment of preparedness in the European Regulation on digital operational resilience for the financial sector (DORA), which will enter into force in January 2025, and to monitor its proper implementation by all those under its supervision.

The insurance and private pensions sector plays a key role in mitigating and adapting to climate change and to sustainability risks, through its investments, products and services. Integrating sustainability considerations into the behaviour of consumers and of insurers and pension funds contributes decisively to a greener, more social and more sustainable economy. The DGSFP closely monitors the effect on the industry of the increase in adverse climate events due to climate change, as well as the exposure to transition risk deriving from investments in certain assets. The DGSFP has included sustainable finance as one of its pillars in its supervisory priorities for 2023-2025.

50 *Retail Investment Strategy.* For more information see the dedicated **section** on the European Commission's website.

Box 3.A Banking crises in the United States and Switzerland in spring 2023

In 2023 three US banks and one Swiss bank failed, requiring the authorities to step in. These events demonstrated how a bank's inadequate risk management and poor governance can lead to liquidity distress that can spread quickly, although there was limited impact in this case, partly thanks to the swift and decisive steps taken by the authorities.

Silicon Valley Bank (SVB) in California was the first hit when it experienced a bank run triggered by a failed share placement. The distress spread to other banks and led to the collapse, one by one, of four banks that shared some characteristics (particularly in terms of having a high percentage of deposits not covered by the Federal Deposit Insurance Corporation). This took place amid inflationary pressures and financial market instability due to the macroeconomic deterioration. Policy interest rate hikes to combat inflation laid bare the imbalances on the three US banks' balance sheets. On the assets side, the debt securities portfolio acquired prior to the interest rate hikes had long maturities and earned interest at lower rates than those of March 2023. The monetary tightening saw the market price of these portfolios drop.[1] On the liabilities side, deposits were concentrated, subject to high turnover and generally exceeded the coverage provided by the Deposit Insurance Fund. This entailed high deposit rates and led to a surge in withdrawals as soon as the first concerns about the bank's solvency aired. **The affected banks shared vulnerabilities in their governance, risk management and funding structure.** The aforementioned imbalances eroded confidence in the solvency of these banks, prompting deposit outflows. These withdrawals forced banks to sell a portion of their portfolios at a loss and, in spite of the authorities' injection of liquidity, the US banks collapsed. In Switzerland, this worsened the travails of Credit Suisse, which had already shown it was poorly managed and governed. All these banks had unsustainable business models in common, as well as vulnerabilities in their governance arrangements, interest rate and liquidity risk management and their funding structure.

These events urged an analysis of the role of banking supervision and the global regulations in place. The national supervisors had detected some of the weaknesses and shortcomings of the affected banks. However, as noted by the Basel Committee on Banking Supervision (BCBS), they did not act quickly enough, owing to slow internal supervisory processes regarding decision-making or a lack of sufficiently effective supervisory and sanctioning measures.

The crises evinced areas for supervisory improvement that apply to different countries to differing degrees. These include:

— full implementation of Basel III standards, with proportionality and sufficient resources;

— analysis of business model sustainability;

— supervision of liquidity lines in stress scenarios, considering potential deposit turnover;

1 For more details, see "The 2023 banking crises: the causes and the role played by bank management, supervisors and regulators" in the Banco de España's Autumn 2023 Financial Stability Review, Issue 45

Box 3.A Banking crises in the United States and Switzerland in spring 2023 (cont'd)

- alertness to interest and market risk;
- availability of an agile and flexible range of adequate supervisory measures suitable for the severity of each case and an improvement in the management processes in the event of non-compliance.

In its analysis of events, the BCBS also addressed regulatory issues and related preliminary lessons. The Basel III framework protected the global banking system, which underlines the importance of its full and consistent implementation at international level. The BCBS also emphasised other issues, including the following.

- Scope and proportionality. The failing US banks were not subject to the Basel III framework in full, since in the United States it only applies to the larger and global systemically important banks. The importance of applying the framework in a proportionate and consistent manner commensurate with banks' risk profile and systemic importance was clearly demonstrated.
- Liquidity standards. Banks' liquidity is sensitive to sudden changes in market perception. This can lead to difficulties if banks are highly leveraged, have imbalances in the maturities of financing or if the interest margin does not cover costs. The vulnerability grows with shifts in customer behaviour fuelled by technology and amplified by social media.
- Treatment of interest rate risk. Monetary policy tightening and its effect on interest rate risk management make it necessary to analyse the adequacy of the current treatment, based on a supervisory (Pillar 2, according to Basel III) and market information (Pillar 3) approach.

As a result of all the foregoing, the BCBS has highlighted strengthening supervisory effectiveness to ensure that these problems can be identified and corrected promptly in the future. It is also analysing and assessing the functioning of the regulatory framework before deciding on the suitability of incorporating changes to specific areas of it.

Box 3.B Agreements made during the Spanish presidency of the Council of the European Union

During the Spanish presidency of the Council of the European Union (EU), which took place in 2023 H2, significant progress was made on financial legislation. Highlights were the various agreements reached on EU regulations on banking, capital markets, means of payment and the insurance sector.

On banking, the final agreement was made to incorporate the latest elements of the Basel III international accords into European law. The transposition of the standards issued by the BCBS in 2017 entails modifying European prudential banking regulations, comprising the Capital Requirements Regulation (CRR III) and the Capital Requirements Directive (CRD VI). Among other changes, these regulations now include a limit on the differences between the capital requirements calculated using internal models and those using standard models. A broad-based overhaul of the prudential treatment of credit, market, operational and credit valuation adjustment risk was also carried out.

Another priority area in the field of banking was the crisis management and deposit insurance (CMDI) framework. This package will amend the Bank Recovery and Resolution Directive, the Single Resolution Mechanism Framework and the Deposit Guarantee Scheme Directive. This initiative seeks to improve the resolution framework and ensure funding, especially for small and medium credit institutions. It includes such aspects as expanding the scope of application of resolution versus winding-up for banks and bolstering resolution funds based on transfer strategies using funds from the Deposit Guarantee Schemes.

Some proposals relating to the capital markets union were practically finalised. In 2023 H2 the discussion of the technical aspects of modifying the Markets in Financial Instruments Regulation and Directive (MiFIR and MiFID II, respectively) was concluded. The main development was the creation of centralised data systems, overcoming the existing fragmentation so that investors can access key information, such as asset prices and the timing and volume of transactions. Progress was also made in the negotiations surrounding the Listing Act, which aims to encourage stock exchange listing by alleviating the requirements that apply during the process of listing and when listed.

Other milestones include the agreement with the European Parliament to approve the Instant Payments Regulation and progress on the digital euro. The agreement on instant payments envisages amendments to the Regulation governing the Single Euro Payments Area, such that all payment service providers that offer their clients transfer services must also offer instant transfers as an option for the same fee as ordinary transfers. Furthermore, Member States also made progress in discussions of the implications of the project for the future issuance of a digital euro, in parallel with the technical research and preparatory work carried out by the ECB.

The insurance sector also saw political agreements reached regarding the contents of the Directive on life insurance and access to the taking-up and pursuit of the business of insurance and reinsurance (Solvency II) and the Insurance Recovery and Resolution Directive. Solvency II

Box 3.B Agreements made during the Spanish presidency of the Council of the European Union (cont'd)

regulates the prudential framework for insurers and reinsurers; one of the main objectives of its amendment was to improve regulations that safeguard financial stability. To that end, two instruments that contribute to stabilising insurers' balance sheets and are countercyclical in nature were improved: the matching adjustment (particularly important in the Spanish market) and the volatility adjustment.

The Solvency II reform saw the introduction of a new section detailing new macroprudential supervision tools handed to the insurance supervisory authority. In terms of liquidity risk, the obligation was put in place for insurers to draft a short-term liquidity plan, even under stressed conditions, and the supervisor was given the ability to demand medium and long-term plans from insurers whose situation requires it and order them to shore up their liquidity position. The supervisor may temporarily restrict an insurer's dividend and bonus payments, should the liquidity risk necessitate such a step, or suspend policyholders' rights to surrender their insurance contracts. In addition, if the entire sector is experiencing an exceptional shock, the supervisor may take steps to safeguard insurers' financial situation. Lastly, a prevention-oriented measure: insurers must account for macro risks when making investments and include in the own risk and solvency assessment the macroeconomic considerations and risks. The supervisor may require more detailed macro analysis from individual insurers, should there be grounds to justify it.

The amendment of the Insurance Recovery and Resolution Directive strengthens the legal framework applicable and entrusts the European Insurance and Occupational Pensions Authority with new and important tasks and responsibilities. The scope of the pre-emptive recovery plans is established for companies representing at least 60% of the respective domestic life and non-life insurance markets, while the overall share of the market for resolution plans is set at 40%. A new resolution authority is also created and equipped with a range of powers and tools. A bank that is declared non-viable shall be resolved when there is no reasonable expectation of any supervisory or private sector intervention that can restore the bank's viability and when public interest requires that it exit the market. Otherwise, if it is decided that there is no such overriding public interest, the non-viable bank must be wound up in line with national regulations.

4 Interconnectedness in the financial system

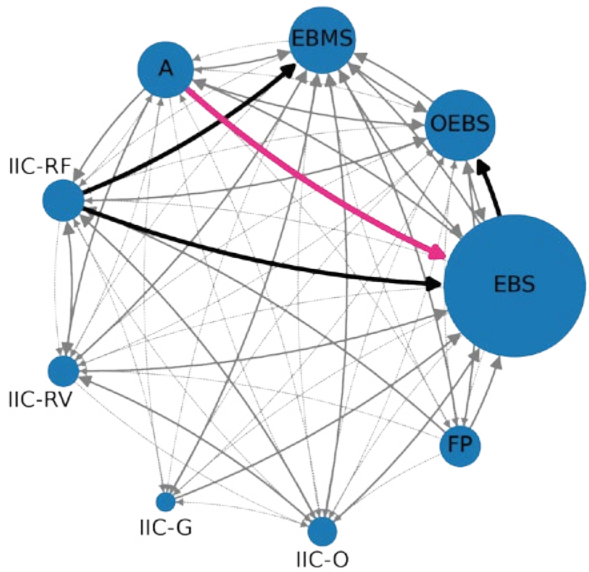
Financial institution interconnections are key for the system to work efficiently, but it is also advisable to analyse the risks they entail. Financial interconnectedness enables financial institutions to concentrate on their main activity, delegating other areas of operations to other banks. Furthermore, these interconnections constitute a mechanism by which banks can modify their risk profile and diversify their exposures, as well as channel excess liquidity (or their financing needs) by investing in assets issued by other financial institutions (or obtaining funding from them). However, these channels can also transmit systemic shocks originating in one or more financial institutions, meaning that it is essential to analyse banks through the lens of financial stability. These risks can spread through either direct interconnections (mainly holdings of financial assets issued by other financial institutions) or indirect interconnections. The latter can arise via both common holdings of financial assets issued by the same issuers, or via exposures to different, but highly correlated, assets.

The structure of the Spanish resident financial system's direct interconnections shows the central role played by the banking sector, whose interconnections with fixed-income funds and insurance companies are pre-eminent. Compared with the analysis in previous reports, this year's report takes a more granular approach, splitting the activity of collective investment undertakings (CIUs) into four separate groups: fixed-income funds, equity funds, guaranteed funds and other CIUs. The findings continue to show that the banking sector is the largest sector[51] and one of the most interconnected (see Figure 4.1). Nevertheless, 2023 saw the previous years' downward trend in the value of direct interconnections reverse, as they grew by 8.8% over the course of the year. In this same period, the financial assets of Spanish banks rose by just 3.3%, which shows that the increase in direct interconnections exceeded the broad-based expansion of the Spanish financial system. This rise may be being driven by the ECB's monetary policy normalisation, given that the waning share of central bank financing is being offset by an increase in interbank financing.

Insurance companies' and CIUs' exposures to systemically important institutions (SIIs) continued to represent one of the system's most significant links. However, insurance companies' exposure fell somewhat, while that of CIUs rose by 36%. Among CIUs, the increased disaggregation analysed in this report showed that the pre-eminent component is the exposure of fixed-income funds to

51 The total financial assets of the resident private financial system exceeded €4 billion in December 2023, of which more than 65% were accounted for by the banking sector.

Figure 4.1 Direct interconnections in the Spanish financial system. December 2023



SOURCES: Banco de España, CNMV and DGSFP.
NOTE: The abbreviations denote systemically important institutions (SIIs), other systemically important institutions (O-SIIs), less significant institutions (LSIs), insurance companies (ICs), fixed-income collective investment undertakings (CIUs-FI), variable-yield collective investment undertakings (CIUs-VY), collateralised collective investment undertakings (CIUs-C), other collective investment undertakings (CIUs-O) and pension funds (PFs). The direct interconnections are calculated taking no account of consolidations between the different financial sectors. The size of the circles is proportional to the total financial assets of each sector or sub-sector. The colour of the arrows denotes the size of the direct exposure: grey dotted, under €1 billion; grey solid, €1 billion to €5 billion; black, €5 billion to €10 billion; and pink, over €10 billion.

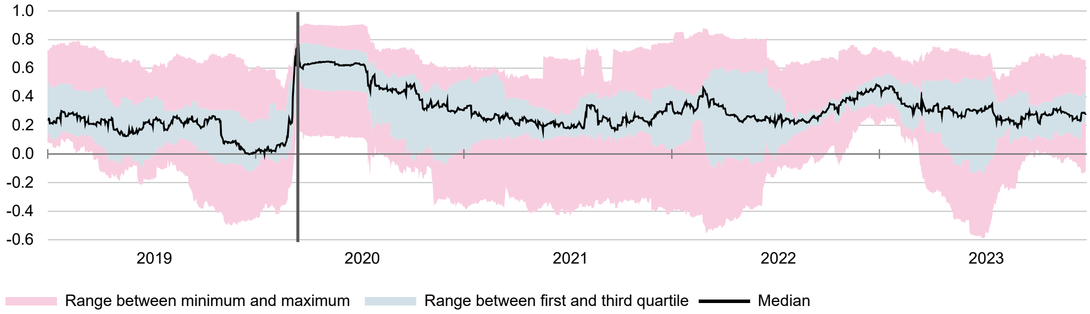
both SIIs and less significant institutions (LSIs).[52] Lastly, the exposure of SIIs to other systemically important institutions (O-SIIs), which rose by 41% since December 2022, was notable.

In 2023, correlations between financial asset classes declined on average, although this trend did not persist over the entire year. This analysis is performed by studying the price correlation between the equities and debt securities issued by Spanish issuers, which offers an idea of the changes in indirect interconnections across financial institutions. The latter indicator picked up from summer 2022 owing to the impact of rising interest rates on the value of debt securities. However, it fell over the course of 2023 owing to the stabilisation of interest rates on the back of the moderation of inflation and inflation expectations in an environment of significant asset revaluation (see Chart 4.1.1) Nevertheless, from March, correlations were affected, above all, by the disturbances caused by the banking crises in the United States and Switzerland, which temporarily slowed the average declining trend then in place and caused considerably greater volatility. In fact, when the correlations between financial and non-financial sector

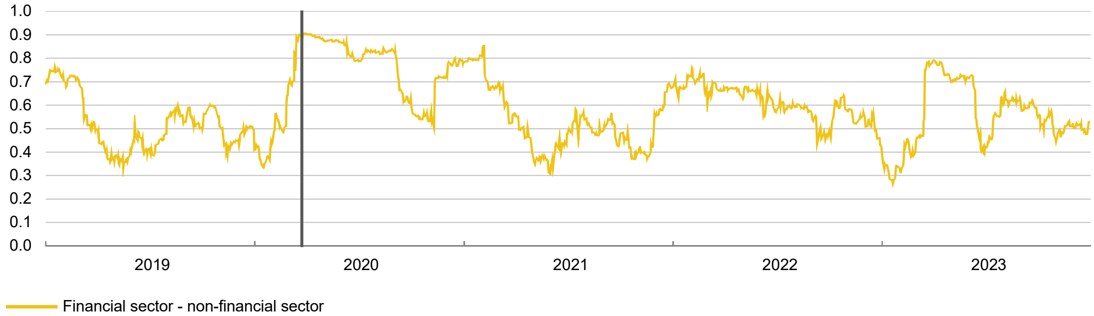
52 The banking sector is broken down into three categories: (i) systemic institutions, i.e. those identified by the Banco de España as global systemically important institutions or O-SIIs; (ii) non-systemic but significant institutions from the standpoint of the Single Supervisory Mechanism; and (iii) LSIs. For further details, see Chapter 4 of AMCESFI's *Annual Report 2020*.

Chart 4.1 Analysis of indirect interconnections through correlations between prices of listed financial assets

1 Indicator of correlation between asset classes (a)



2 Indicators of correlation between the financial and the non-financial sector (b)



SOURCE: CNMV.

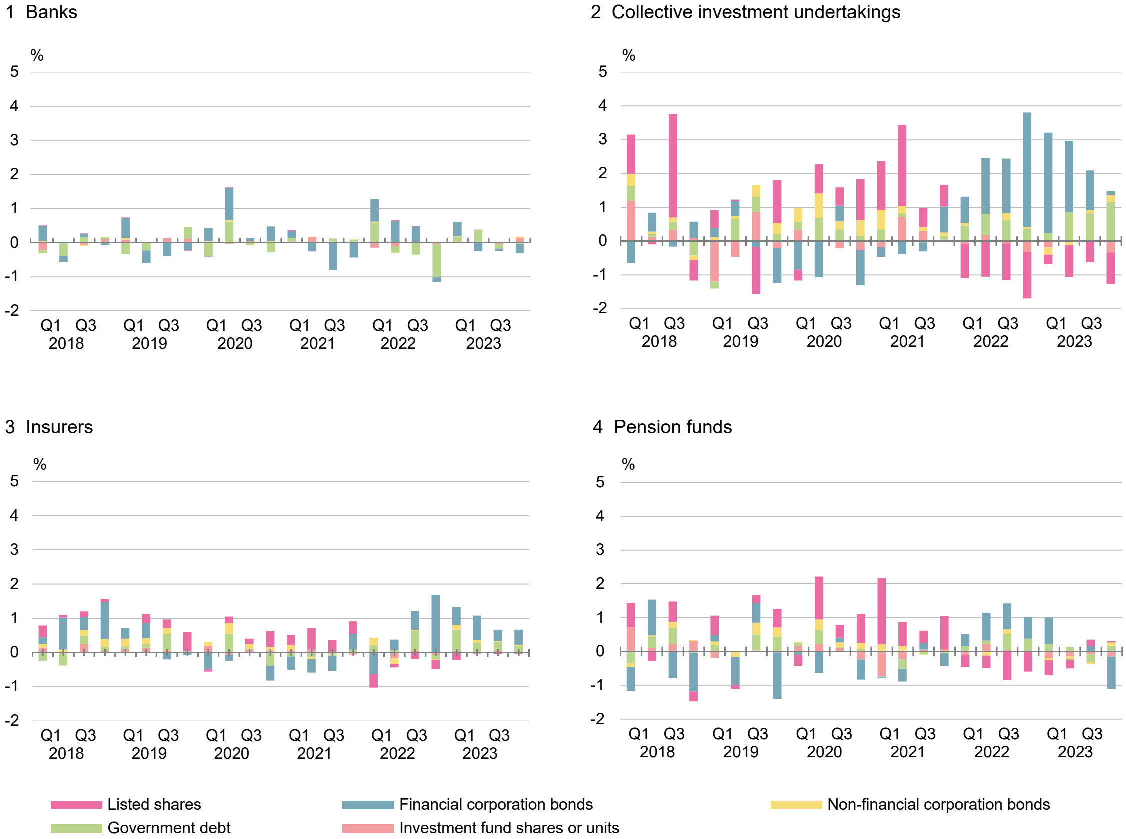
a The indicator of correlation between asset classes takes correlation pairs calculated by drawing on daily data in 3-month windows. The asset classes are sovereign debt, corporate bonds of financial and non-financial institutions and equity securities of financial institutions, utilities and all other sectors. The vertical line marks early March and the start of the market turmoil owing to the health crisis.

b The indicators of correlation between the financial and the non-financial sector take correlation pairs calculated by drawing on daily data in 3-month windows. The assets considered for the calculation are listed equity securities of the financial and the non-financial sectors. In addition, the latter has been split into two groups: i) the sectors most vulnerable to the effects of the COVID-19 pandemic, and ii) all other non-financial sectors. The vertical line marks the start of the market turmoil owing to the health crisis, in early March.

assets are analysed (calculated based only on equity securities), their averages can be seen to have undergone a marked rise from March to June, beginning in the first few weeks of the banking crises (see Chart 4.1.2). The situation stabilised in 2023 H2 once these shocks had settled, meaning that all the correlations tended to drop and were also much less volatile.

Indirect interconnections through common holdings of financial assets saw a moderation in activity in terms of transactions in 2023. In particular, all financial sectors reduced their government debt purchases in 2023 (see Chart 4.2), although with some significant differences. The banking sector recorded net sales of its government debt in 2023, while, by contrast, CIUs continued to make large purchases of government debt, although in increasingly smaller amounts as the year went on. Further, CIUs and pension funds continued to lead in transactions of investment fund shares or units. In both cases, net transactions of this asset

Chart 4.2 Net transactions by type of instrument as a % of the sector's total assets

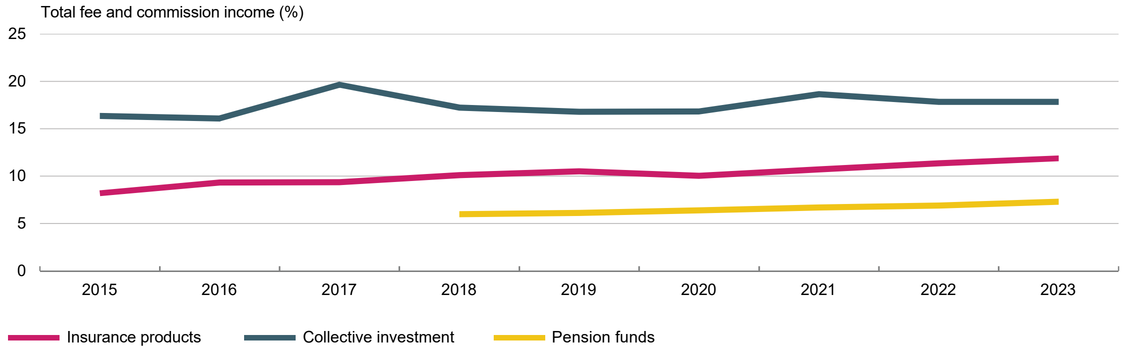


SOURCES: Banco de España (Financial Accounts of the Spanish Economy) and ECB (Securities Holdings Statistics by Sector).

type continue the decline seen since 2022, although the trend has been gradually easing. Lastly, share purchases continue to account for only a very small share for all sectors.

As noted above, the business model of some financial institutions forms another important interconnection channel. Notwithstanding the asset-side interconnections mentioned above, there are other sources of interconnectedness, fundamentally driven by business models. In particular, there is noteworthy interconnectedness between the banking and insurance sectors as a result of the significance of the insurance companies linked to banking groups (the bancassurance business) within the Spanish insurance sector and these institutions' contribution to earnings in the banking sector through the payment of fees and commissions and dividends. The distribution of insurance products through the banking network is particularly important in terms of life insurance. The drivers characterising growth in the bancassurance business are the following: (a) the extent of the Spanish physical bank network; (b) the similarity between savings products with a view to retirement and financial products; and (c) the materiality of the insurance companies linked to loans (both those linked to consumer credit as well as those linked to mortgages) within the overall life insurance market.

Chart 4.3 Income from fees and commissions linked to insurance and collective investment products marketed by the banking sector



SOURCES: Banco de España and CNMV.
NOTE: For fees and commissions relating to the marketing of pension funds no data are available before 2018.

The extraordinary growth of life-savings insurance within current bancassurance activity is noteworthy. Endowment insurance guarantees benefits in the event of survival. Its growth has benefited from the current interest rate environment, which allows for better returns on savings, and the strategy of some banks. Nevertheless, life insurance continues to be a highly profitable segment of bancassurance operations. The contribution of insurance products and pensions funds to banks' fee and commission income again rose slightly in 2023, while that of collective investment products remained stable (see Chart 4.3). However, said growth was limited, accounting for less than 1% of total fee and commission income. From a banking conduct perspective, the high returns on credit protection insurance entail risks owing to potentially unsound practices regarding their underwriting and sale. As such, the European Insurance and Occupational Pensions Authority called for better value for money in bancassurance in a European-wide warning to banks and insurers. The DGSFP has made this issue its priority for the Spanish payment protection insurance market and has utilised the supervisory powers it wields in this regard.

Lastly, there are other interconnections of various types that merit closer study. Notable examples include operations on derivatives markets and their central counterparty clearing houses, cyber risks and artificial intelligence risks.

5 European Systemic Risk Board recommendations and warnings relevant to AMCESFI

AMCESFI, in its capacity as the national macroprudential authority, receives recommendations from the European Systemic Risk Board (ESRB). The ESRB's recommendations are aimed at preventing or mitigating systemic risks and vulnerabilities or at promoting policy interventions by the relevant EU authorities, including national macroprudential authorities, designated supervisory and resolution authorities and even Member States. The ESRB also addresses recommendations to the European Commission, ECB Banking Supervision, the three European banking supervisory authorities (the European Banking Authority, the European Insurance and Occupational Pensions Authority and the European Securities and Markets Authority) and the Single Resolution Board.

In 2023 the ESRB issued three recommendations relevant to the Banco de España on voluntary reciprocity for the macroprudential policy measures implemented in Norway, Sweden, Denmark and Portugal. These recommendations aim to ensure that the measures activated in one Member State (of the EU or the European Economic Area) are applied reciprocally in the other Member States, thereby guaranteeing the effectiveness and consistency of national macroprudential policy measures. In 2023, Recommendation ESRB/2015/2 on the assessment of cross-border effects of and voluntary reciprocity for macroprudential policy measures was amended. Norway (ESRB/2023/1) extended the phase-in period (by one year, from December 2022 to December 2023) of the macroprudential measures introduced in 2021 that established: (i) a systemic risk buffer rate for exposures located in Norway and (ii) average risk weight floors for real estate exposures located in Norway for calculating capital requirements for credit institutions using advanced Internal Ratings-Based (IRB) Internal Ratings-Based (IRB) approaches. Sweden (ESRB/2023/4), introduced floors for the average risk weights applied to corporate exposures secured by immovable properties for credit institutions authorised to use the IRB approach of credit risk measurement for calculating regulatory capital requirements. Recommendation ESRB/2023/13 addressed two systemic risk buffer-related measures, one applying to exposures located in Denmark to non-financial corporations operating in real estate activities and the other to IRB exposures to natural persons secured by residential immovable property for which the collateral is located in Portugal.[53]

The ESRB issues recommendations that are not binding, but they are subject to a general "act or explain" principle. The ESRB conducts regular

53 The ESRB recommendation led to the Banco de España adopting a macroprudential measure in 2024, which was subject to an AMCESFI opinion, reciprocating the Portuguese measure.

Table 5.1 ESRB recommendations in force addressed to AMCESFI

ESRB recommendation	AMCESFI	Banco de España	CNMV	DGSFP	FROB	Government
Recommendation ESRB/2022/9 of 1 December 2022 on vulnerabilities in the commercial real estate sector in the European Economic Area						
Recommendation ESRB/2020/12 of 24 September 2020 on identifying legal entities	FC	FC	LC	LC	FC	
Recommendation ESRB/2019/18 of 26 September 2019 on exchange and collection of information for macroprudential purposes on branches of credit institutions having their head office in another Member State or in a third country	FC	FC				
Recommendation ESRB/2016/14 of 31 October 2016 on closing real estate data gaps	FC (a)					
Recommendation ESRB/2015/2 of 15 December 2015 on theassessment of cross-border effects of and voluntary reciprocity for macroprudential policy measures	FC/SE (a)	FC/SE				
Recommendation ESRB/2013/1 of 4 April 2013 on intermediate objectives and instruments of macroprudential policy	LC (a)					LC

SOURCES: ESRB and AMCESFI.
NOTE: The shaded cells denote the authorities to which each recommendation is addressed. Degree of compliance is indicated where an ESRB compliance assessment report is available, as follows: Fully Compliant (FC); Largely Compliant (LC); Partially Compliant (PC); Materially Non-Compliant (MN); Sufficiently Explained (SE); and Insufficiently Explained (IE).

a Before the creation of AMCESFI in 2019, the Banco de España, as the designated authoritiy for the banking sector, assumed responsibility for complying with the ESRB Recommendations addressed to the macroprudential authority.

assessment exercises to determine the degree of compliance by the addressee authorities with each of its recommendations. In 2023, an ESRB assessment team analysed the degree of compliance with the recommendation on closing real estate data gaps (ESRB/2016/14). The ESRB also published its multi-year assessment on the degree of compliance with its recommendation on the assessment of cross-border effects of and voluntary reciprocity for macroprudential policy measures (ESRB/2015/2) between 1 July 2019 and 30 June 2021. For both recommendations, the ESRB concluded that AMCESFI had fully implemented the sub-recommendations addressed to it in its capacity as the macroprudential authority.

Table 5.1 lists the ESRB recommendations in force addressed to AMCESFI, indicating the degree of compliance, based on the ESRB's assessment, if available. Annex 2 lists other ESRB recommendations addressed to at least one Spanish authority.

As well as recommendations, the ESRB can issue warnings on vulnerabilities in the EU if systemic risk to financial stability is identified. These warnings can be addressed to the EU as a whole or to individual Member States, the European supervisory authorities or national authorities. In 2023 the ESRB did not issue any warning in addition to that issued in 2022 on vulnerabilities in the EU financial system (ESRB/2022/7).

Box 5.A Coordination in response to cyber incidents with systemic scope

In February 2023 the European Systemic Risk Board (ESRB) published a report entitled *Advancing macroprudential tools for cyber resilience.* In this report, the ESRB invited authorities to take a more proactive approach in the light of the significance of cyber risk and the current context of cyber threats, both in the financial sector and beyond. To that end, the report proposed two initiatives to improve the the European financial sector's cyber readiness.

These initiatives were cyber resilience scenario testing (CyRST) and systemic impact tolerance objectives (SITOs). These are relatively new and unexplored concepts in the financial sector at systemic level, but are highly relevant in the current context, in which there is an increasing number of cyber incidents among both financial institutions and their suppliers. Both initiatives will provide authorities with an initial assessment of the financial sector's cyber readiness, thus allowing future steps to improve it to be more tightly focused.

CyRST is a tool designed to assess the financial system's capacity to respond to and recover from a severe cyber incident. To this end, a severe but plausible scenario is designed that would have a potential impact on financial stability. The impact it would have on participants, how they would respond to a similar situation and the extent to which they could continue to provide key services are documented. Assessing all the responses together makes it possible to evaluate the overall financial system's capacity to recover from the cyber incident and continue to provide key services.

SITOs, meanwhile, define the threshold above which the financial system is no longer capable of absorbing the aggregate impact of a systemic cyber incident. It defines the point of maximum tolerance of the system, which can then be used to define lower thresholds that pose a lesser systemic impact. These lower thresholds can serve to alert the authorities or function as the trigger for activating crisis management frameworks.

Although there are similar initiatives and concepts in the microprudential field,[1] the systemic focus of the initiatives proposed by the ESRB places European financial authorities at the cutting edge of efforts aimed at systemic cyber risk. This novelty entails additional complexity with regard to extending their application, given the lack of existing benchmarks, examples or best practices.

The 2023 report also addressed the assessment of existing financial crisis management tools and their potential use during crises triggered by cyber incidents. This analysis showed that, while financial tools can be used to mitigate the impacts of specific cyber incidents, they should be modified to ensure their effectiveness in these situations, which are characterised by their speed of propagation and potentially cross-border impact. Another finding was that many of the tools require banks and infrastructures to maintain a minimum level of operations, which may be unavailable during a cyber incident. This highlights the importance of measures aimed at ensuring the sector's operational capacity, not just its financial capacity.

1 For example, in 2024 the European Central Bank (ECB) conducted the first stress tests aimed at assessing banks' capacity to recover from cyberattacks. See the ECB press release of 3 January 2024.

Box 5.A Coordination in response to cyber incidents with systemic scope (cont'd)

In this field, and to complement the 2023 analysis, in 2024 the ESRB published its report entitled *Advancing macroprudential tools for cyber resilience - Operational policy tools* in which it assessed EU macroprudential tools with operational aims. These tools focus on preserving the underlying processes and systems on which the functioning of the financial system relies and can help mitigate the impact before, during and after a cyber incident. The ESRB focused on three distinct groups of tools, given their potential to strengthen the financial system's resilience: (i) tools for gathering, sharing and managing information; (ii) coordination tools; and (iii) emergency and backup systems.

One of the tools highlighted in that report is the pan-European systemic cyber incident coordination framework (EU-SCICF). Rooted in a 2022 ESRB recommendation, the EU-SCICF is an EU-wide framework intended to enable swift coordination among financial authorities for the mitigation and resolution of the financial impacts of a systemic cyber incident. The framework, which does not aim to address the incident's technological resolution, meets the need identified by the ESRB for financial authorities to have a mechanism for responding rapidly to systemic cyber incidents, given their potential speed of propagation, which is far ahead of that of other events that have an impact on financial stability.

Annex 1 Dashboard of risk indicators

Chart A1.1 **Macroeconomic risk**

1 Real GDP, seasonally adjusted quarter-on-quarter rate of change

2 Unemployment rate according to the LFS

3 Inflation according to headline HICP

4 Government debt and deficit

5 Resident private sector debt, consolidated

6 Current account balance

7 Negative net international investment position

8 Unit labour costs

Chart A1.2 **Market risk**

1 Equity markets

2 10-year government bond yield

3 1-year EURIBOR

4 International market volatility

5 IBEX 35 volatility

Chart A1.3 **Credit risk**

1 NPL ratio, deposit institutions

2 Coverage ratio, deposit institutions

3 Spanish 10-year government bond yield spread over Germany

4 Credit default swap indicators

5 Credit to the resident private sector

6 New credit to the resident private sector

Chart A1.4 **Real estate exposure**

1 Real estate market developments

2 House price overvaluation estimates

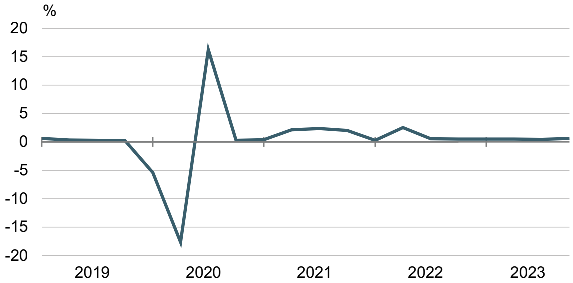
3 Housing and construction loans

4 New housing loans

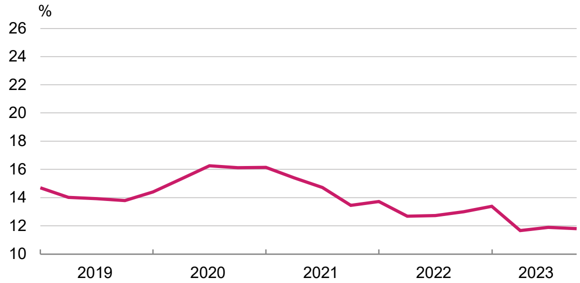
Chart A1.5	**Liquidity and financing risk**	
	1	3-month LIBOR-OIS spread
	2	Eurosystem monetary policy interest rates
	3	Spain’s average interest rate spread against the euro area on new loans of up to €1 million extended to firms
	4	Bond issuances
	5	Equity issuances by Spanish firms
	6	Loan-to-deposit ratio, other resident sectors
	7	Trading of Spanish equities
	8	Bid-ask spreads
Chart A1.6	**Solvency and profitability risk. Banks. Consolidated data**	
	1	Return on equity (ROE)
	2	Cost-to-income ratio
	3	Capital ratios
	4	Leverage ratio (phase-in)
	Insurance undertakings	
	5	Return on equity (ROE)
	6	Gross non-life combined ratio
	7	Solvency ratio
Chart A1.7	**Structural risks and interconnectedness**	
	1	Financial sector assets
	2	Assets of other financial intermediaries
	3	Investment funds
	4	Assets of insurers and pension funds
	5	Banking sector liabilities, by sector
	6	Systemic risk indicator
Chart A1.8	**Other risks**	
	1	Greenhouse gas emission intensity
	2	Global crypto-asset market capitalisation
	3	Global market capitalisation of the main stablecoins

Chart A1.1 Macroeconomic risk

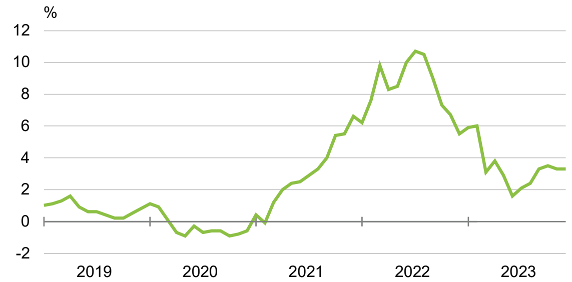
1 Real GDP, seasonally adjusted quarter-on-quarter rate of change (a)



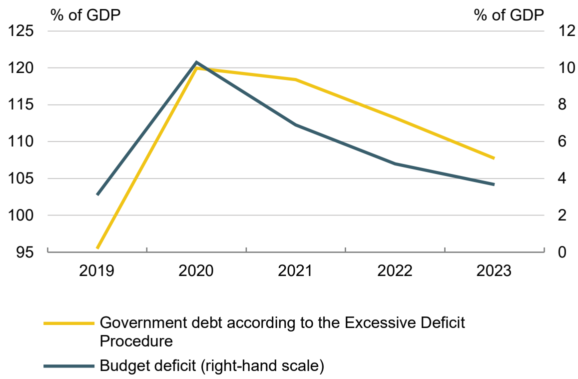
2 Unemployment rate according to the LFS



3 Inflation according to headline HICP (b)



4 Government debt and deficit

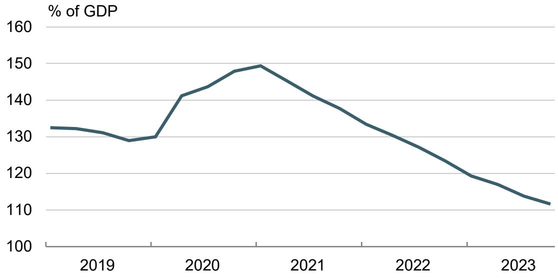


SOURCE: Ministerio de Economía, Comercio y Empresa.

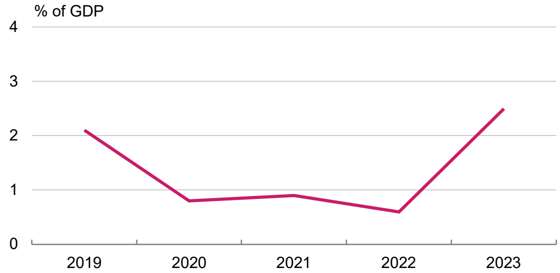
a Quarterly rate of change.
b Annual rate of change.

Chart A1.1 **Macroeconomic risk** (cont'd)

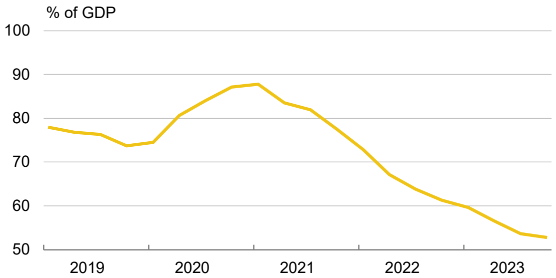
5 Resident private sector debt, consolidated (a)



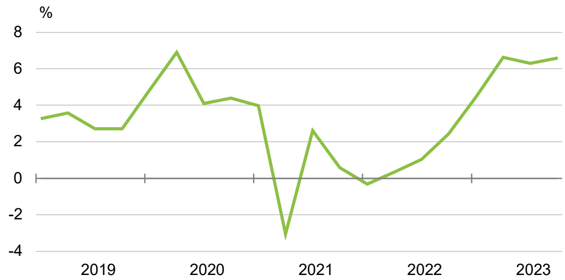
6 Current account balance



7 Negative net international investment position



8 Unit labour costs (ULC) (b)

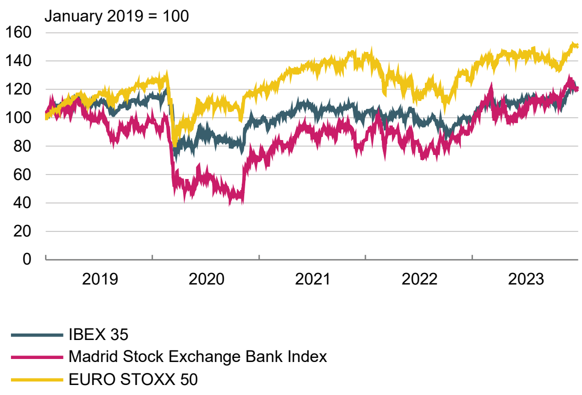


SOURCE: Ministerio de Economía, Comercio y Empresa.

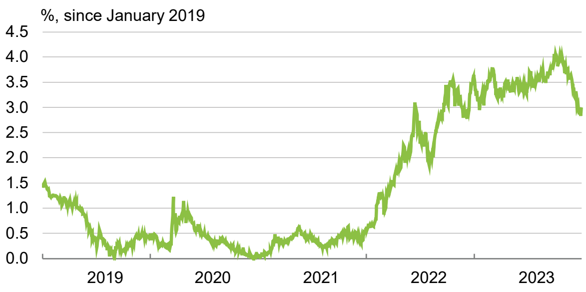
a NFCs and households and non-profit institutions serving households.
b Annual rate of change.

Chart A1.2 Market risk

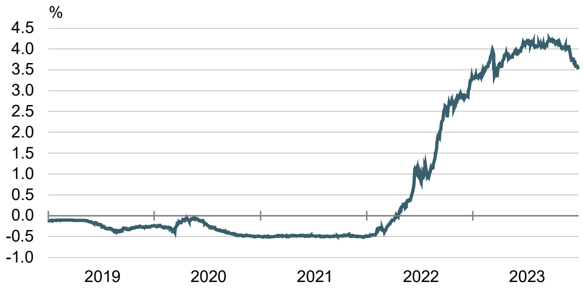
1 Equity markets



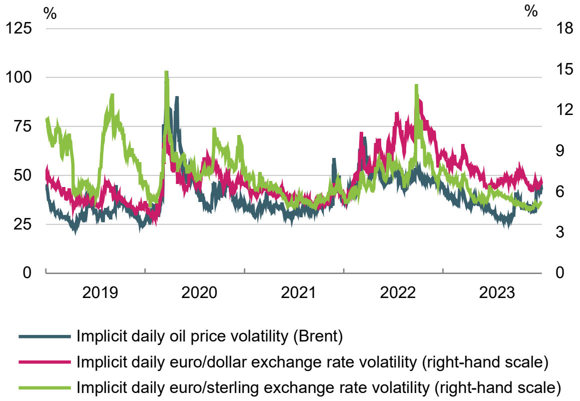
2 10-year government bond yield



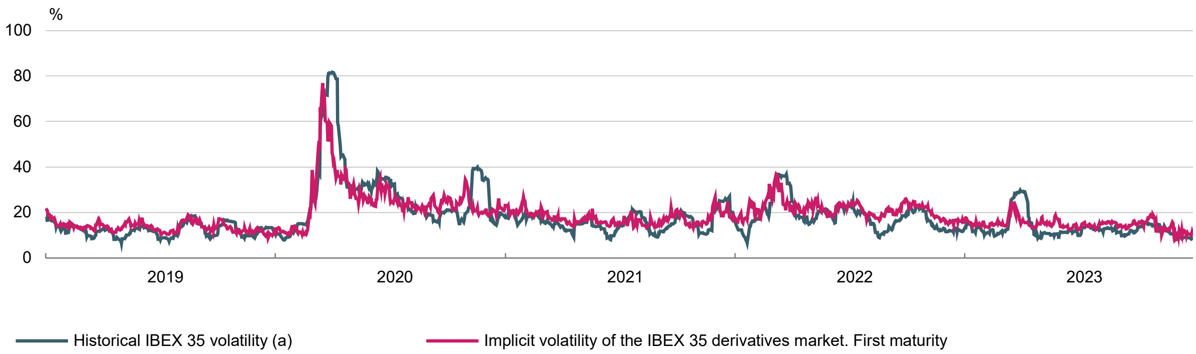
3 1-year EURIBOR



4 International market volatility



5 IBEX 35 volatility

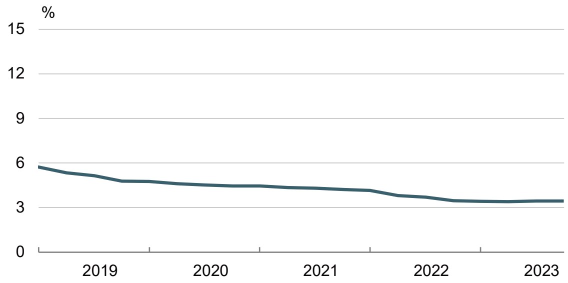


SOURCE: Datastream.

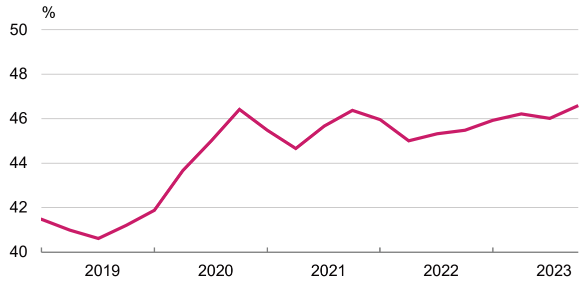
a The indicator of historical volatility is calculated as the annualised standard deviation of daily IBEX 35 price changes over 21 days.

Chart A1.3 Credit risk

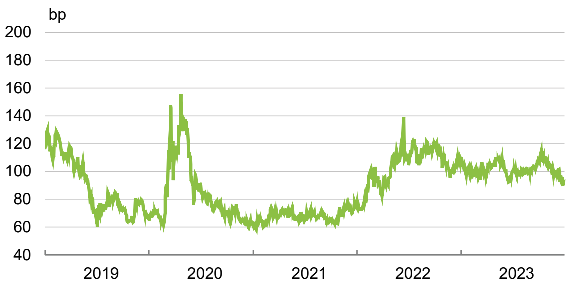
1 NPL ratio, deposit institutions (a)



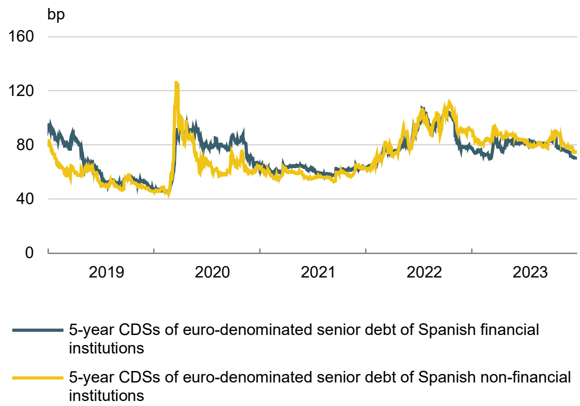
2 Coverage ratio, deposit institutions (a)



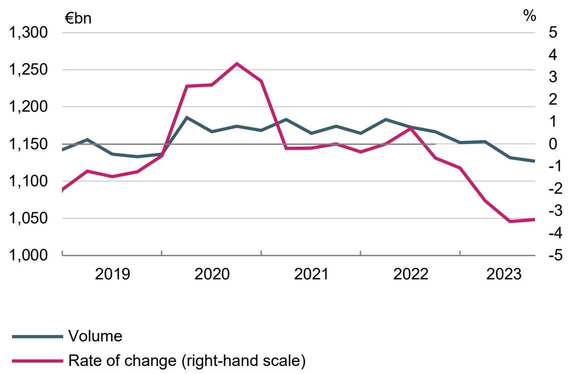
3 Spanish 10-year government bond yield spread over Germany



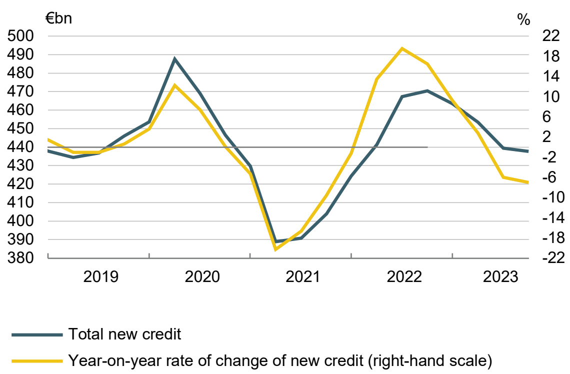
4 Credit default swap indicators (b)



5 Credit to the resident private sector (c)



6 New credit to the resident private sector (c) (d)

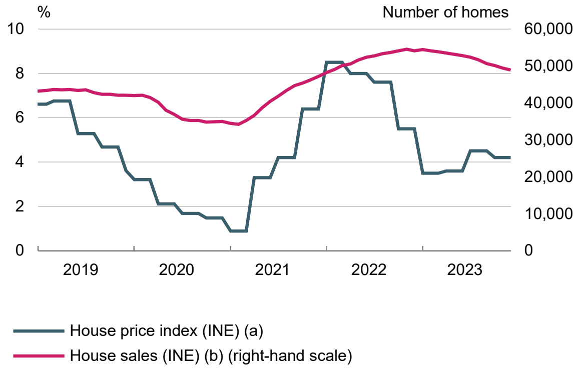


SOURCE: Banco de España.

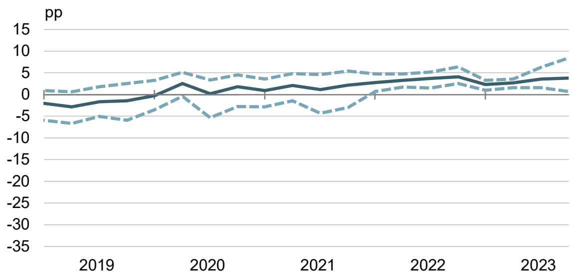
a Bank-level data, business in Spain.
b Simple average of a sample of IBEX 35 members.
c Households and NFCs.
d Cumulative 12-month flow.

Chart A1.4 **Real estate exposure**

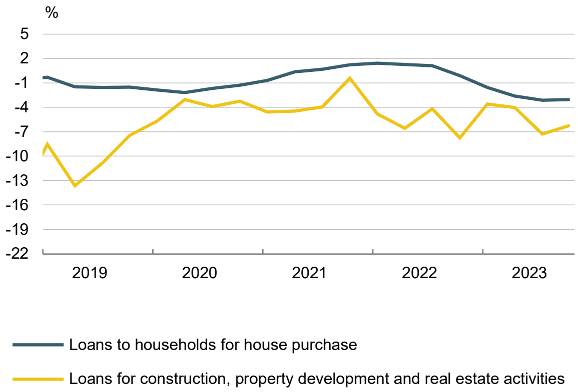
1 Real estate market developments



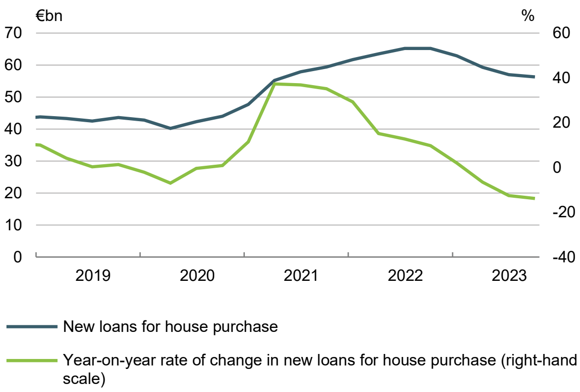
2 House price overvaluation estimates (c)



3 Housing and construction loans (d)



4 New housing loans (e)

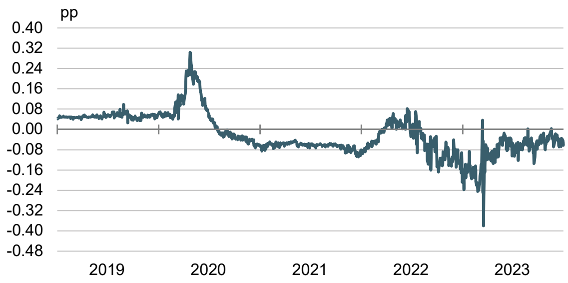


SOURCE: Banco de España.

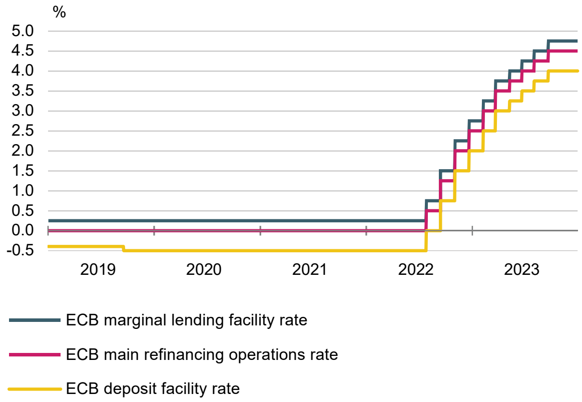
a Annual rate of change.
b 12-month moving average.
c The solid and broken lines denote, respectively, the average, minimum and maximum values of a set of four indicators for changes in real estate sector prices vis-à-vis their long-term trends: (i) house price gap with respect to the long-term trend calculated using a Hodrick Prescott filter with a smoothing parameter of 400,000; (ii) house-price-to-disposable income ratio gap with respect to the long-term trend calculated using a Hodrick Prescott filter with a smoothing parameter of 400,000; (iii) econometric model for house price imbalances explained by long-term trends in disposable income and mortgage rates; and iv) long-term econometric model for long-term house price imbalances explained by prices in preceding periods, disposable income, new mortgage rates and fiscal variables.
d Year-on-year rate of change.
e Cumulative 12-month flow. Including credit to households and NPIs.

Chart A1.5 Liquidity and financing risk

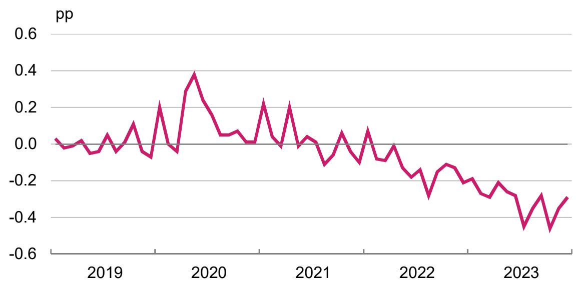
1 3-month LIBOR-OIS spread



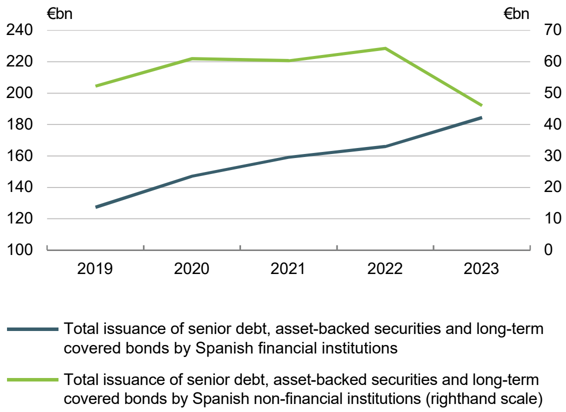
2 Eurosystem monetary policy interest rates



3 Spain's average interest rate spread against the euro area on new loans of up to €1 million extended to firms



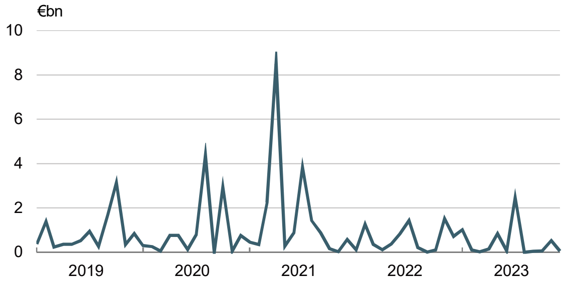
4 Bond issuances



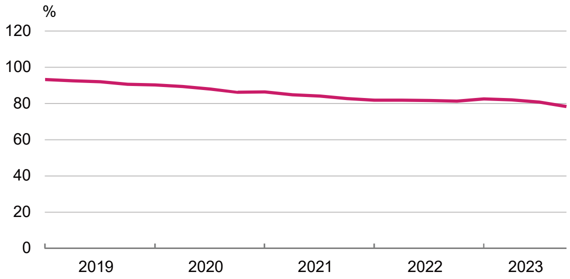
SOURCES: Banco de España, ECB and CNMV.

Chart A1.5 **Liquidity and financing risk** (cont'd.)

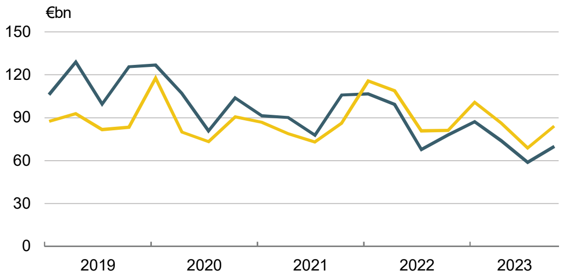
5 Equity issuances by Spanish firms



6 Loan-to-deposit ratio, other resident sectors (a)



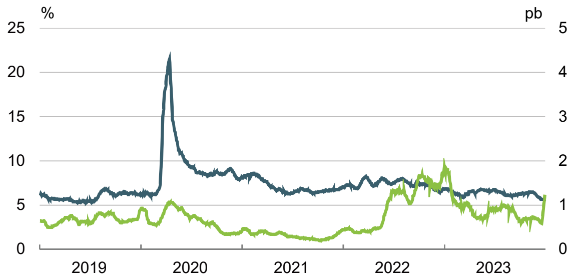
7 Trading of Spanish equities



Spanish equities traded on Spanish stock market

Spanish equities traded on foreign stock markets (Chi-X, Turquoise, BATS and others)

8 Bid-ask spreads



IBEX 35 bid-ask spread

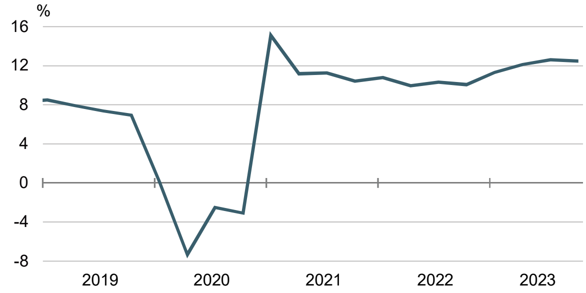
10-year sovereign bond bid-ask spread (right-hand scale)

SOURCES: CNMV and Banco de España.

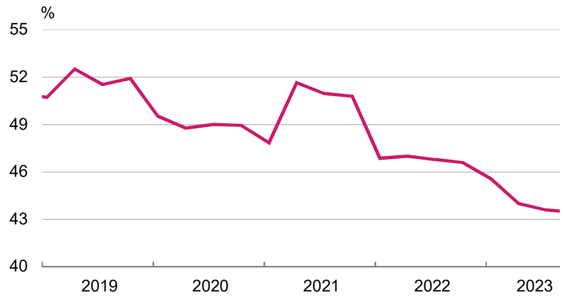
a Households and NFCs.

Chart A1.6 Solvency and profitability risk. Banks. Consolidated data

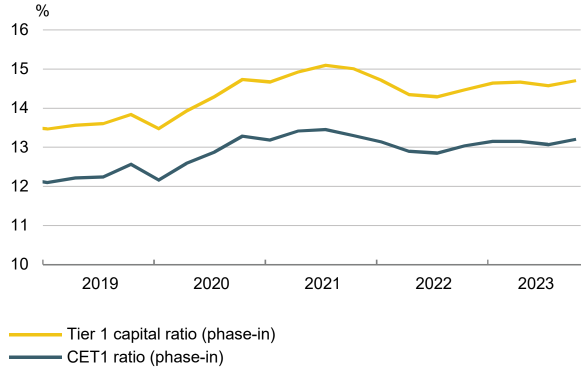
1 Return on equity (ROE) (a)



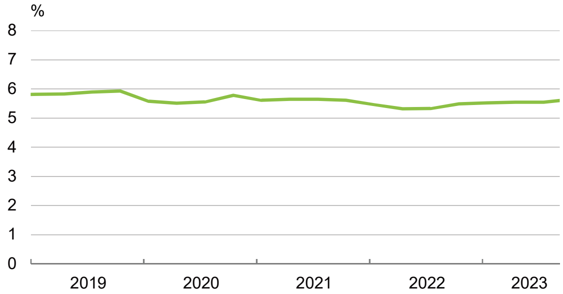
2 Ratio cost to income (b)



3 Capital ratios



4 Leverage ratio (phase-in)

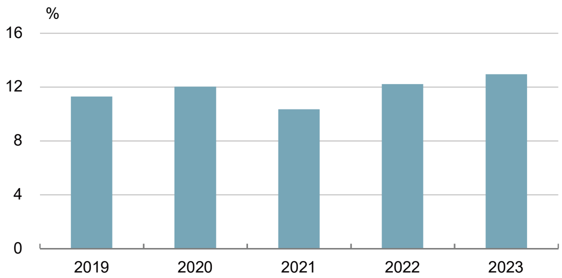


SOURCE: Banco de España.

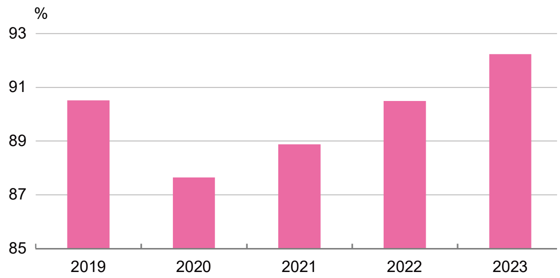
a Net income as a proportion of average equity.
b Operating costs as a proportion of gross income.

Chart A1.6 Solvency and profitability risk. Insurance undertakings (cont'd.)

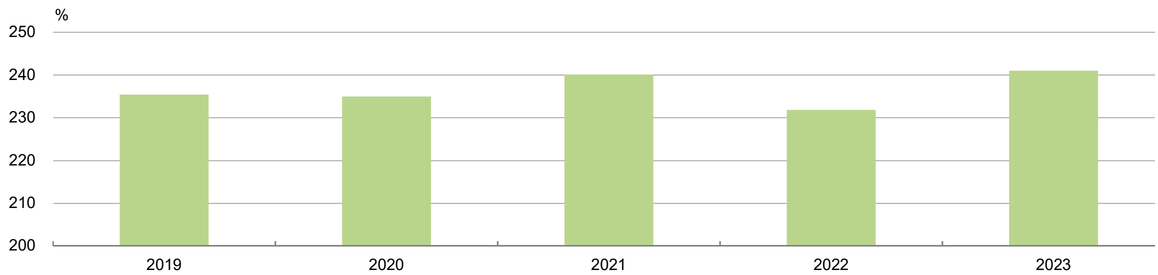
5 Return on equity (ROE)



6 Gross non-life combined ratio



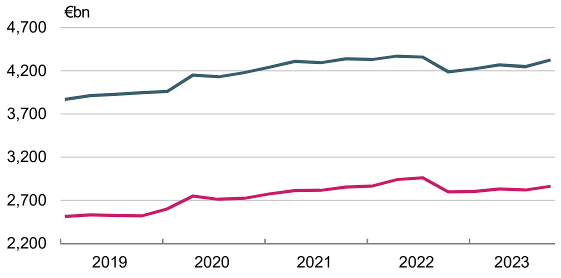
7 Solvency ratio



SOURCE: DGSFP.

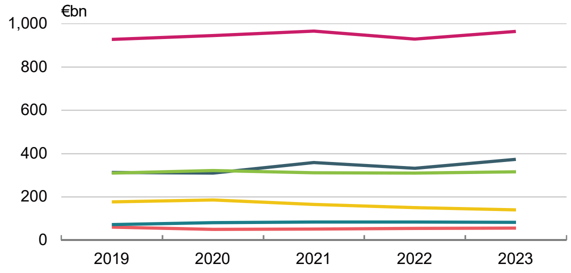
Chart A1.7 Structural risks and interconnectedness

1 Financial sector assets



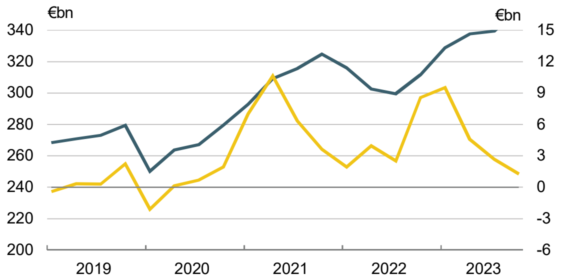
Total financial sector assets
Total banking sector assets

2 Assets of other financial intermediaries



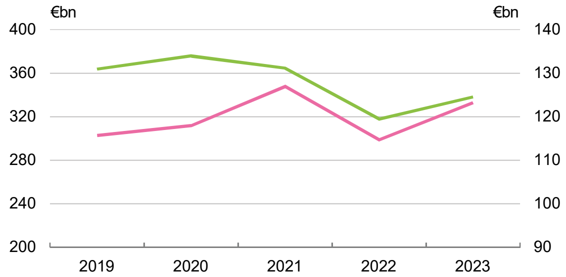
Total assets of other financial intermediaries (a)
Financial CIUs (b)
Securitisation SPEs
Captive financial institutions and money lenders
Specialised lending institutions
Other (c)

3 Investment funds



Net asset value
Net subscriptions (right-hand scale)

4 Assets of insurers and pension funds



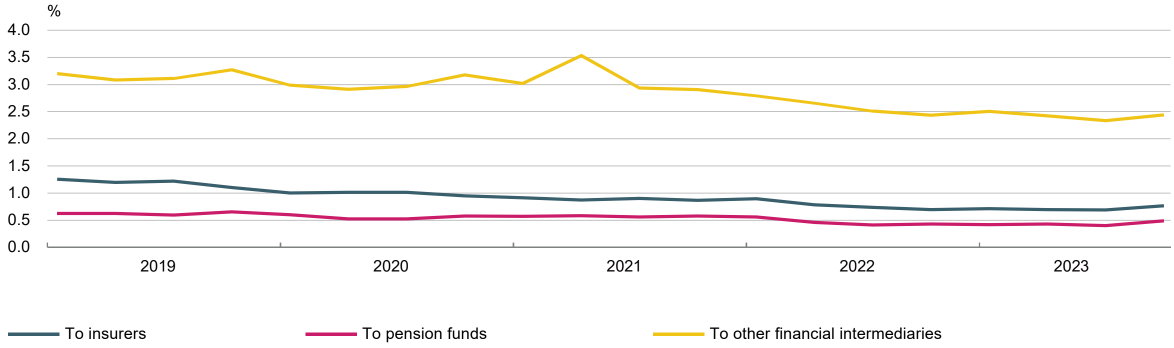
Insurers
Pension funds (right-hand scale)

SOURCES: CNMV, DGSFP and Banco de España.

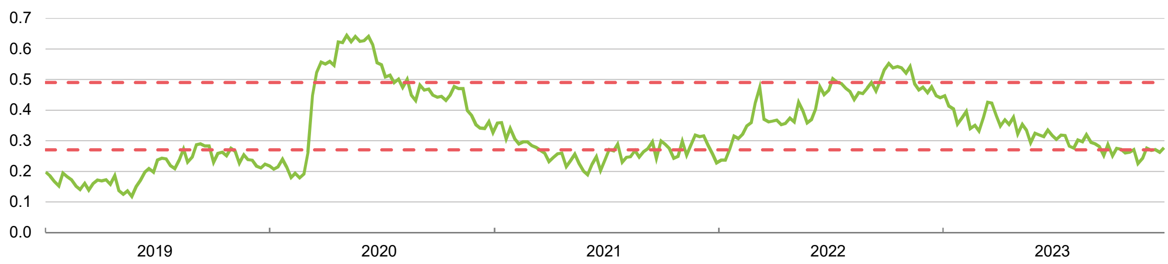
a The 2021 data are provisional.
b Includes investment funds (including money market funds), open-end investment companies and hedge funds.
c From 2020, not including assets belonging to Sareb, which was reclassified in the general goverment sector.

Chart A1.7 **Structural risks and interconnectedness** (cont'd.)

5 Banking sector liabilities, by sector (a)



6 Systemic risk indicator (b)

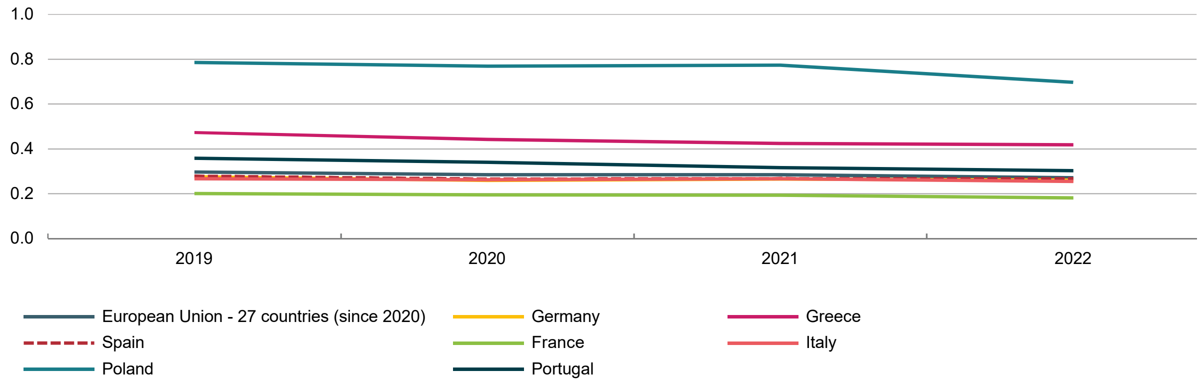


SOURCES: Banco de España and CNMV.

a Distributions as a percentage of total liabilities with the financial sector.
b Stress is measured in six segments of the financial system and is aggregated, to obtain a single figure that factors in the correlation between the segments. The econometric estimates suggest that indicator values below 0.27 denote periods of low stress, values between 0.27 and 0.49 denote periods of medium stress, and values over 0.49 denote periods of high stress. The broken red lines mark the boundaries between the different stress levels (high, medium and low).

Chart A1.8 Other risks

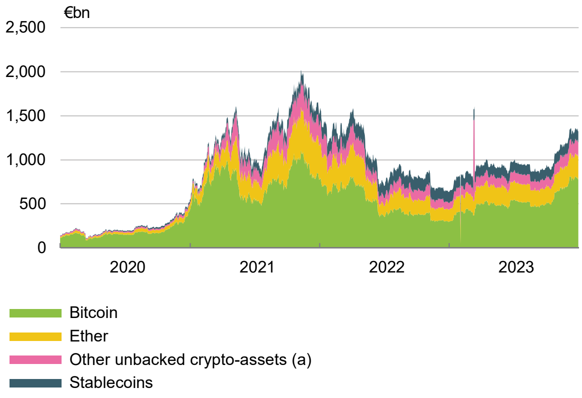
1 Greenhouse gas emission intensity



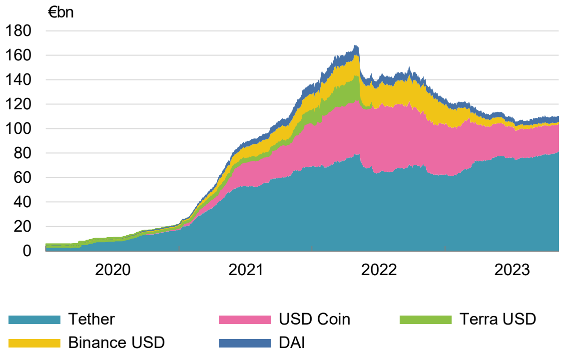
SOURCE: Eurostat.
NOTE: Intensity calculated as greenhouse gas emissions (in thousands of tonnes) as a proportion of real GDP (in € millions).

Chart A1.8 **Other risks** (cont'd.)

2 Global crypto-asset market capitalisation



3 Global market capitalisation of the main stablecoins



SOURCE: CoinGecko.
NOTE: CoinGecko, like other similar websites, does not constitute an official, comparable data source.

a Other unbacked crypto-assets include the market capitalisation of the top ten crypto currencies, excluding stablecoins, Bitcoin and Ether.

Annex 2 Recommendations issued by the ESRB relevant to AMCESFI member institutions and other authorities in Spain

Table A2.1 Relevant ESRB recommendations, by authority

ESRB recommendation	Banco de España	CNMV	DGSFP	Government
Recommendation ESRB/2021/17 of 2 December 2021 on a pan-European systemic cyber incident coordination framework for relevant authorities				
Recommendation ESRB/2020/6 of 25 May 2020 on liquidity risks arising from margin calls	SE	FC/LC	SE	
Recommendation ESRB/2015/1 of 11 December 2015 on recognising and setting countercyclical buffer rates for exposures to third countries	FC			
Recommendation ESRB/2014/1 of 18 June 2014 on guidance for setting countercyclical buffer rates	FC			
Recommendation ESRB/2012/2 of 20 December 2012 on funding of credit institutions	FC			
Recommendation ESRB/2011/3 of 22 December 2011 on the macroprudential mandate of national authorities				PC[1]
Recommendation ESRB/2011/2 of 22 December 2011 on US dollar denominated funding of credit institutions	FC			
Recommendation ESRB/2011/1 of 21 September 2011 on lending in foreign currencies	FC			

SOURCES: ESRB and Banco de España.
NOTE: The shaded cells denote the authorities to which each recommendation is addressed. ESRB recommendations not addressed to national authorities and those only affecting specific Member States are excluded. Recommendations amending previous recommendations are likewise not included. Degree of compliance is indicated where an ESRB compliance assessment report is available, as follows: Fully Compliant (FC); Largely Compliant (LC); Partially Compliant (PC); Materially Non-Compliant (MN); Sufficiently Explained (SE); and Insufficiently Explained (IE).

Annex 3 Key publications by AMCESFI institutions

This annex compiles regular articles and occasional papers on topics related to the analysis of financial stability and macroprudential policy published by AMCESFI member institutions between July 2023 and June 2024. For publications relating to 2023 H1, see Annex 3 of the AMCESFI *Annual Report 2022*.

Banco de España

Financial Stability Report. Spring 2024

Financial Stability Report. Autumn 2023

Supervision Report 2023

Annual Report 2023

"Access to credit and firm survival during a crisis: the case of zero-bank-debt firms"
Roberto Blanco, Miguel García-Posada, Sergio Mayordomo and María Rodríguez-Moreno
Working Papers, 2421, Banco de España (2024)

"Analysis of cyclical systemic risks in Spain and of their mitigation through countercyclical bank capital requirements"
Ángel Estrada, Carlos Pérez Montes, Jorge Abad, Carmen Broto, Esther Cáceres, Alejandro Ferrer, Jorge Galán, Gergely Ganics, Javier García Villasur, Samuel Hurtado, Nadia Lavín, Joël Marbet, Enric Martorell, David Martínez-Miera, Ana Molina, Irene Pablos and Gabriel Pérez-Quirós
Working Papers, 2414, Banco de España (2024)

"Should macroprudential policy target corporate lending? Evidence from credit standards and defaults"
Luis Fernández Lafuerza and Jorge E. Galán
Working Papers, 2413, Banco de España (2024)

"The impact of the Countercyclical Capital Buffer on credit: Evidence from its accumulation and release before and during COVID-19"
Mikel Bedayo and Jorge E. Galán
Working Papers, 2411, Banco de España (2024)

"Climate transition risk and the role of bank capital requirements"
Salomón García Villegas and Enric Martorell
Occasional Paper, 2410, Banco de España (2024)

"Un análisis de la evolución de la actividad bancaria en España tras el establecimiento del gravamen temporal de la ley 38/2022"
Ángel Estrada and Carlos Pérez Montes
Occasional Paper, 2408, Banco de España (2024)

"The role of macroprudential policy in the stabilisation of macro-financial fluctuations."
Pablo Hernández de Cos
Conference on Financial Stability/Banco de Portugal, Lisbon (Portugal), 2 October 2023
Occasional Paper, 2403, Banco de España (2024)

"In-person access to banking services in Spain:2023 Monitoring Report"
María Alonso, Laura Crespo, Eduardo Gutiérrez-Chacón, Arancha Gutiérrez, Enrique Moral-Benito, Auxiliadora Moreno, Diana Posada, Patrocinio Tello and Carlos Trucharte
Occasional Paper, 2320, Banco de España (2023)

"Dividend Restrictions and Search for Income"
Esther Cáceres and Matías Lamas
Working Papers, 2332, Banco de España (2023)

"Optimal regulation of credit lines"
José E. Gutiérrez
Working Papers, 2323, Banco de España (2023)

"Risk and vulnerability indicators for the Spanish housing market"
Pana Alves, Carmen Broto, María Gil and Matías Lamas
Occasional Paper, 2314, Banco de España (2023)

"Public guarantees and private banks' incentives: evidence from the COVID-19 crisis"
Gabriel Jiménez, Luc Laeven, David Martínez-Miera and José-Luis Peydró
Working Papers, 2318, Banco de España (2023)

"Individual and sectoral analysis framework for the impact of economic and financial risks"
Carlos Pérez Montes, Alejandro Ferrer, Laura Álvarez Román, Henrique Basso, Beatriz González López, Gabriel Jiménez, Pedro Javier Matínez-Valero, Sergio Mayordomo, Álvaro Menéndez Pujadas, Lola Morales, Myroslav Pidkuyko and Ángel Valentín
Occasional Paper, 2313, Banco de España (2023)

"The amplification effects of adverse selection in mortgage credit supply"
Salomón García
Working Papers, 2316, Banco de España (2023)

“Basel core principles for effective banking supervision: an update after a decade of experience”
Asunción Alonso, Danae Durán, Belén García-Olmedo and María Antonia Quesada
Financial Stability Review. Issue 46. Spring 2024. Banco de España

“Revisiting the estimation of the cost of equity of euro area banks”
Luis Fernández Lafuerza and Mariya Melnychuk
Financial Stability Review. Issue 46. Spring 2024. Banco de España

“The euro area banking sector and MREL: a challenge for medium-sized banks?”
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Glossary

AMCESFI	*Autoridad Macroprudencial Consejo de Estabilidad Financiera* (Spanish macroprudential authority)
APP	Asset purchase programme
AT1	Additional tier 1
ATA	Average total assets
BCBS	Basel Committee on Banking Supervision
BdE	Banco de España
bn	Billion
bp	Basis points
CCoB	Capital conservation buffer
CCP	Central counterparty clearing house
CCyB	Countercyclical capital buffer
CDS	Credit default swap
CET1	Common equity tier 1
CIU	Collective investment undertaking
CNMV	*Comisión Nacional del Mercado de Valores* (National Securities Markets Commission)
COVID-19	Coronavirus disease 2019
CPI	Consumer price index
CRD	Capital Requirements Directive
CRE	Commercial real estate
CRR	Capital Requirements Regulation
CSPP	Corporate sector purchase programme
DeFi	Decentralised finance
DFR	Deposit facility rate
DGSFP	*Dirección General de Seguros y Fondos de Pensiones* (Directorate General of Insurance and Pension Funds)
EBA	European Banking Authority
EBITDA	Earnings before interest, depreciation and amortisation
ECB	European Central Bank
EF	Economic function
EIOPA	European Insurance and Occupational Pensions Authority
ESG	Environmental, social, and governance
ESMA	European Securities and Markets Authority
ESRB	European Systemic Risk Board
EUR	Euro
FROB	*Fondo de Reestructuración Ordenada Bancaria* (Fund for the Orderly Restructuring of the Banking Sector)
FSB	Financial Stability Board
FSR	Financial Stability Report
FSTC	*Financial Stability Technical Committee* (AMCESFI)
GDP	Gross domestic product

G-SII	Global systemically important institution
HICP	Harmonised Index of Consumer Prices
HQLA	High-quality liquid assets
ICO	*Instituto de Crédito Oficial* (Official Credit Institute)
IMF	International Monetary Fund
INE	*Instituto Nacional de Estadística* (National Statistics Institute)
IOSCO	International Organisation of Securities Commissions
LCCTE	*Ley 7/2021, de 20 de mayo, de cambio climático y transición energética* (Climate Change and Energy Transition Law 7/2021 of 20 May 2021)
LEI	Legal Entity Identifier
LFS	Labour Force Survey
LGD	Loss given default
LTI	Loan-to-income
LTP	Loan-to-price
LTROs	Longer-term refinancing operations
LTV	Loan-to-value
MiCA	Markets in Cryptoassets Regulation
MMFs	Money market funds
NBFI	Non-bank financial intermediation
NFCs	Non-financial corporations
NIIP	Net international investment position
OIS	Overnight index swap
O-SII	Other systemically important institution
PD	Probability of default
PEPP	Pandemic emergency purchase programme
PER	Price earnings ratio
PMI	Purchasing Managers’ Index
pp	Percentage points
Q	Quarter
ROA	Return on assets
ROE	Return on equity
RWAs	Risk weighted assets
SCCyB	Sectoral countercyclical capital buffer
SHS	Securities Holdings Statistics
SHSS	Securities Holdings Statistics by Sector
SICAV	Open-end investment company
SLI	Specialised lending institution
SOCIMI	Real estate investment company
SRB	Single Resolution Board
SRI	Systemic risk indicator
SSM	Single Supervisory Mechanism
SyRB	Systemic risk buffer
T2	Tier 2

TLTROs	Targeted longer-term refinancing operations
UCITS	Undertakings for collective investment in transferable securities
USD	United States dollar

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