Chapter 2

Spanish banking system. Supervisory model. Suptech activities

Banco de España
Supervision Report 2025

1 Spanish banking system

The Spanish banking system fared positively in 2025 and at year-end all the solvency indicators signalled that banks were well positioned to deal with tensions without jeopardising their solvency and viability. However, caution remains the order of the day in light of the possible adverse impact on banking activity of certain persisting economic and geopolitical risks.

The banking system comprises credit institutions (banks, savings banks and cooperatives) whose key functions are to take deposits from and lend and provide banking services to their customers, primarily households and firms. Credit institutions play a key role in the economy and are a cornerstone of the financial system. In consequence, they operate under a robust European regulatory framework and are supervised by the European Central Bank (ECB) and the Banco de España under the Single Supervisory Mechanism (SSM).

— The SSM classifies credit institutions as significant institutions (SIs) and less significant institutions (LSIs) based on their size and economic importance for their country. The Banco de España directly supervises LSIs and actively collaborates with the ECB in the supervision of SIs (see Section 2 for more details).

— Broadly speaking, both consolidated groups of credit institutions, which can include one or more of those institutions, and individual institutions that are not part of a consolidated group are subject to supervision.

— In December 2025 a total of 135 groups and individual credit institutions operated in Spain through permanent establishments. They can be categorised into three types (Charts 2.1.a and 2.1.b):

  - Ten groups of Spanish SIs, some of which carry out notable international activity. They account for the vast majority of the system's assets.

  - 56 Spanish LSIs or groups of LSIs. This category comprises individual credit institutions that are not part of any consolidated group of credit institutions and groups that may include one or more credit institutions.

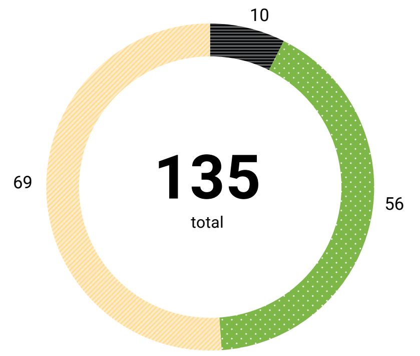
  - 69 groups comprising other subsidiaries and/or branches of foreign credit institutions, mostly from European Union countries. Of the credit institutions in this category, 30 are foreign SIs.

  - As in previous years, the number of groups and the share of assets are broadly stable

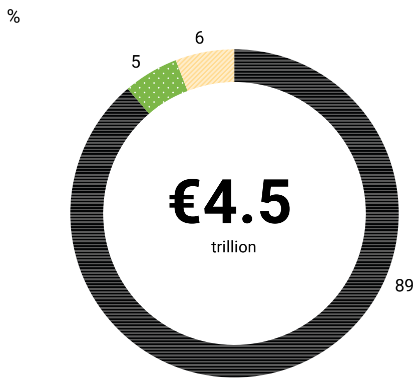
Table 2.1 breaks down, by legal form, the individual credit institutions (whether or not they are part of a group) registered with Banco de España at 31 December 2025. The register includes the Official Credit Institute (ICO, by its Spanish initials), as a publicly owned credit institution.

Chart 2.1
Banking institutions operating in Spain in 2025

2.1.a Number of groups



2.1.b Market share by asset volume



Spanish significant institutions | Less significant institutions (LSIs) | Subsidiaries and/or branches of foreign banking groups

SOURCE: Banco de España.
NOTE: LSIs include individual credit institutions that do not belong to any consolidated group and groups that can include one or more individual credit institutions.

Table 2.1
Total number of institutions registered with the Banco de España

Data at 31 December

	2024	2025
Credit institutions	**188**	**187**
Banks	46	43
Savings banks	2	2
Credit cooperatives	61	60
ICO (Official Credit Institute)	1	1
Branches of EU credit institutions	74	78
Branches of non-EU credit institutions	4	3

SOURCE: Banco de España.

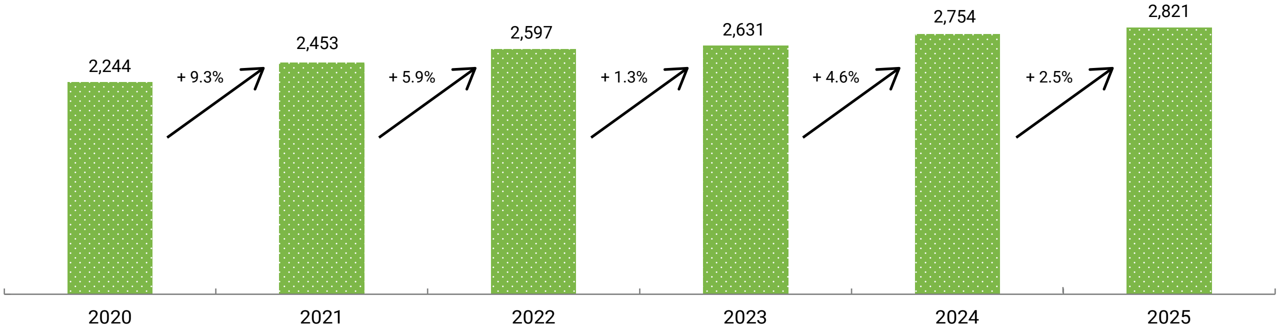
There are 187 individual credit institutions in total. Of the Spanish credit institutions, 35 are SIs and 66 are LSIs. More than half of the foreign institutions are SIs.

At December 2025, the Spanish banking sector managed €4.5 trillion in consolidated assets. Business abroad accounted for a significant portion (some 41%) of this activity, giving an idea of the relevance of several groups' international business.

Chart 2.2
Consolidated loans and receivables

2.2.a Loans and receivables (a)

% growth of loans and receivables; figures in €bn



SOURCE: Banco de España (supervisory statistics on credit institutions).

a Loans and advances included in accounting portfolios subject to impairment tests in accordance with IFRS 9 (amortised cost and fair value through other comprehensive income portfolios). Held-for-trading and fair value through profit or loss portfolios, in addition to cash balances with central banks and other sight deposits with credit institutions, are therefore excluded.

— In line with the Spanish banking system's marked retail banking profile, loans and receivables – mainly loans and advances to households and firms – account for a large share of these assets (around 63%).

— Chart 2.2 depicts the consolidated loans and receivables of the Spanish banking system since 2020. They grew slightly in 2025 (2.5%), mainly driven by business in Spain.

— Thus, the change in trend that began in late 2024, when lending in Spain began to pick up after almost two years of declines, has taken hold. Between the pandemic and then, the increase in loans and receivables had mainly been underpinned by lending abroad.

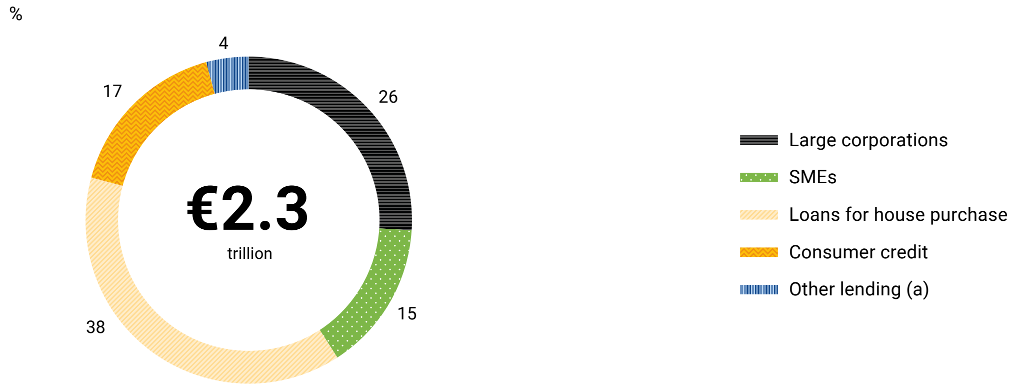
— Loans to the non-financial private sector – most notably residential mortgages to households, followed by loans to large corporations – account for 80% of these loans and receivables (Chart 2.3).

Despite the global geopolitical uncertainty, the Spanish banking system's asset quality improved in 2025, aided by the favourable macroeconomic environment in Spain (Chart 2.4).

— The non-performing loan (NPL) ratio declined moderately but steadily, reaching its lowest level since 2008 (2.4% in December 2025). Meanwhile, the stage 2 ratio, that is, the share of loans with a significant increase in credit risk since initial recognition, decreased more relevantly (5.9% in December 2025), continuing the trend of 2024.

— Lower private debt, higher employment and a lower interest rate environment (around 2%) were among the factors behind the improvement in asset quality. In addition,

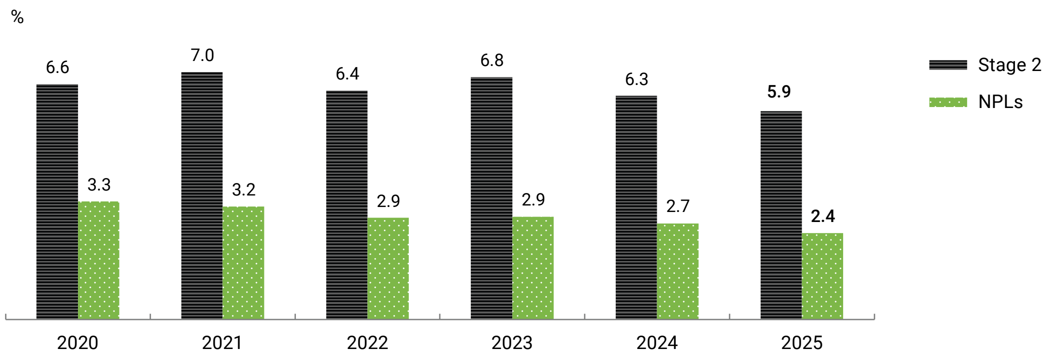
Chart 2.3
Loans to the non-financial private sector



SOURCE: Banco de España.

a "Other lending" includes lending to households different from loans for house purchase and consumer credit, and lending to sole proprietors and to non-profit institutions serving households.

Chart 2.4
Non-performing loan (NPL) and stage 2 ratios (a)



SOURCE: Banco de España (supervisory statistics on credit institutions).

a In accordance with IFRS 9, NPLs (or stage 3 loans) are loans with credit impairment; stage 2 loans are those with a significant increase in credit risk since their initial recognition; and all other loans are considered to be performing (stage 1) loans.

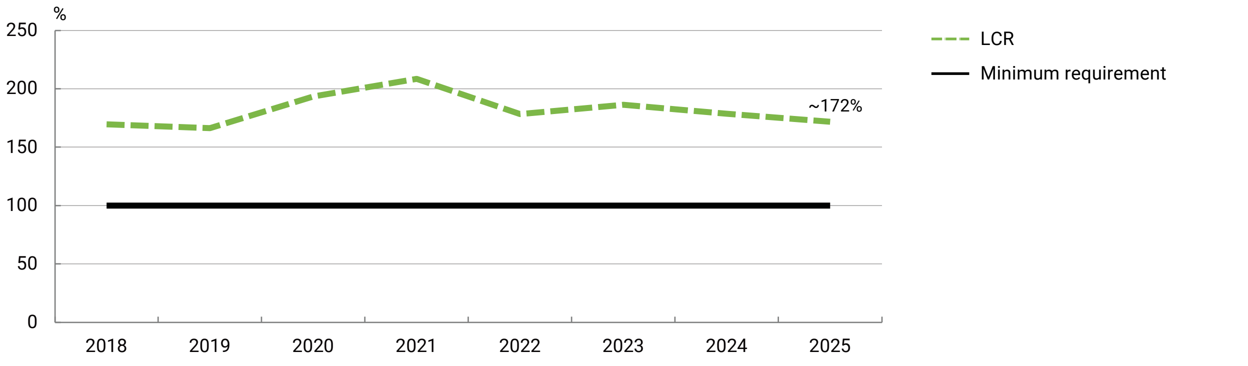
banks continued to manage problem assets, including by selling portfolios of NPLs and write-offs.

— However, certain economic and geopolitical risks persist that could affect employment, curb growth and reduce borrowers' ability to pay. As a result, vigilance remains the order of the day.

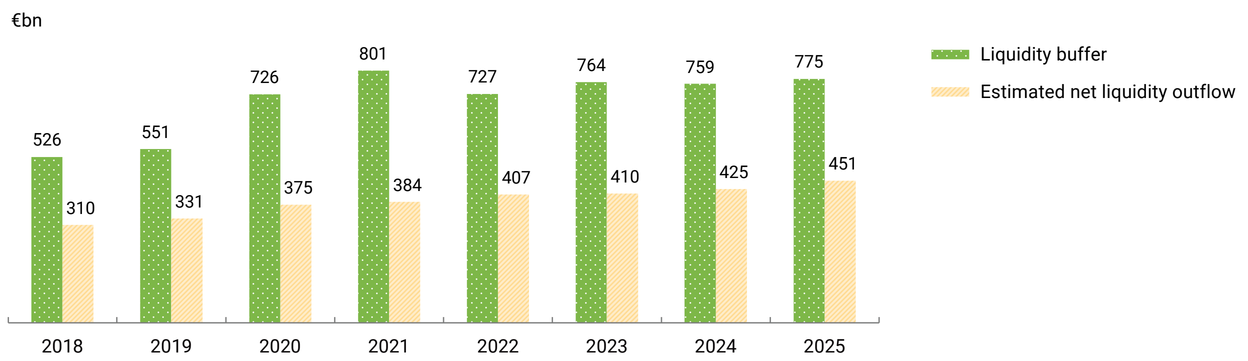
Spanish institutions' liquidity position remains sound, although the liquidity coverage ratio (LCR) decreased slightly in 2025 (Chart 2.5).

Chart 2.5
Credit institutions' short-term liquidity shield

2.5.a Liquidity coverage ratio (LCR)



2.5.b High-quality liquid assets and expected net outflows over 30 days (a)



SOURCE: Banco de España (supervisory statistics on credit institutions).

a The LCR is calculated by dividing high-quality liquid assets by expected net outflows of cash over 30 days.

— The LCR declined slightly, standing at around 172% in December 2025 (179% in December 2024), well above the minimum regulatory requirement of 100%. This reflects that the banking sector has more high-quality liquid assets (those which can be immediately converted into cash without any significant loss of value) than it would need to meet its liquidity needs under a 30-calendar day regulatory crisis scenario.

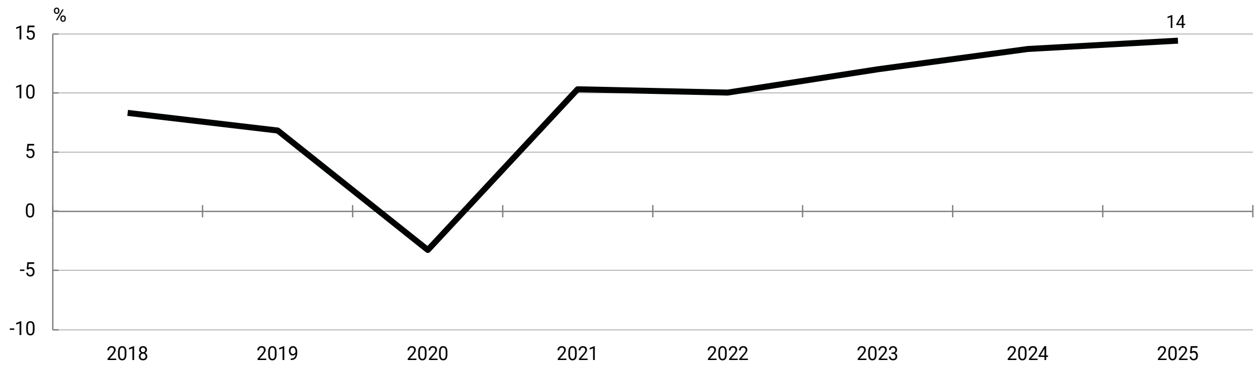
— Traditional deposit-taking was once again the main source of bank liquidity.

— Lending in Spain has grown since 2024, draining liquidity only moderately. This liquidity effect has been partially offset by the increase in deposits, particularly time deposits, which has kept liquid assets at the same level, with a small rise in net cash outflows.

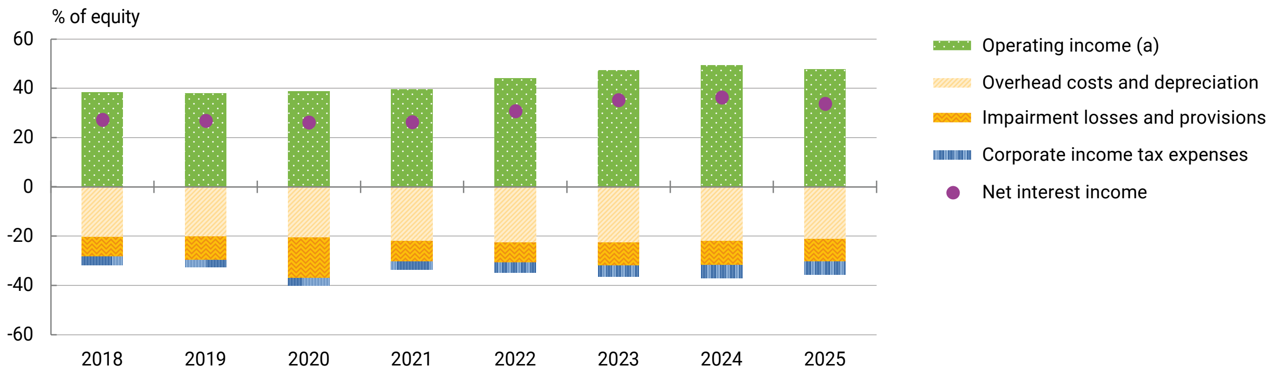
In 2025 Spanish banks' profitability continued to increase, reaching an all-time high, although it grew at a more moderate pace than in prior years because of lower interest rates (Charts 2.6 and 2.7).

Chart 2.6
Profitability of the Spanish banking system

2.6.a ROE (Return on equity)



2.6.b Income statement key components



SOURCE: Banco de España (supervisory statistics on credit institutions).

a Operating income is the sum of net interest income, net fee and commission income, net income from financial operations, net foreign exchange differences and other net operating income.

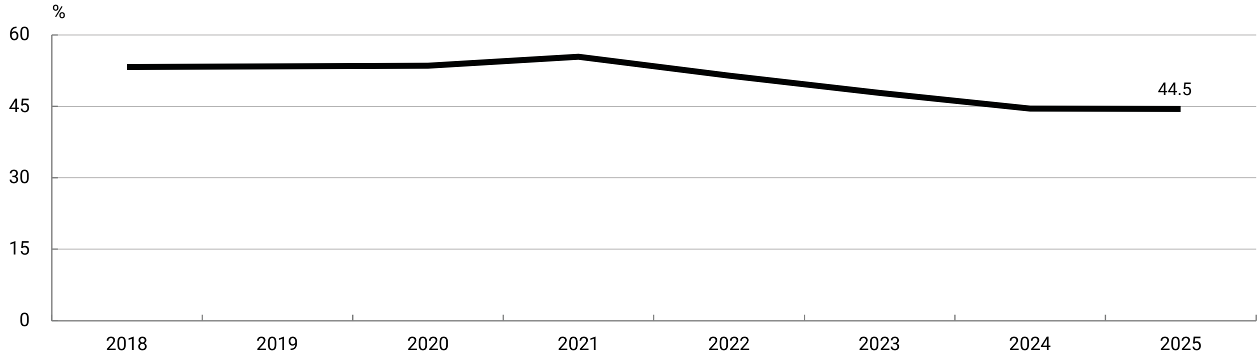
— The sector recorded aggregate return on equity (ROE) of 14% in December 2025 (13.7% in December 2024), well above the average for SSM SIs (10.1%).

  This was driven by higher fee and commission income and lower provisioning needs for loan impairment and other contingencies, such as operational or conduct events (for instance, mortgage arrangement fees). These factors offset the fall in net interest income and the slight increase in overhead costs.

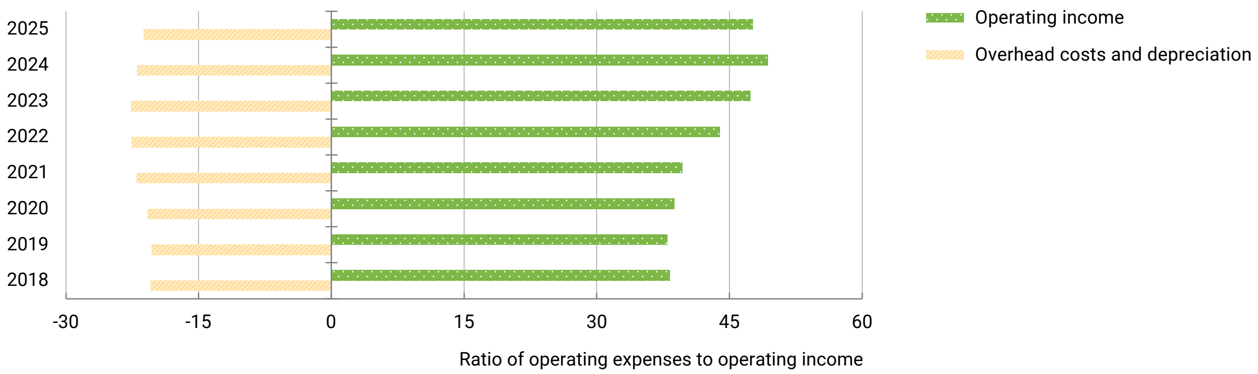
— The cost/income ratio was broadly unchanged, at 44.5%. Prominent in the slight rise in overhead costs was the increase in digital transformation costs.

Chart 2.7
Credit institutions' cost/income ratio

2.7.a Cost/income ratio



2.7.b Breakdown of cost/income ratio (% of equity)



SOURCE: Banco de España (supervisory statistics on credit institutions).

Spanish credit institutions' capital ratios stand at their highest levels since the establishment of the SSM and above regulatory requirements, demonstrating sound loss-absorbing capacity (Chart 2.8).

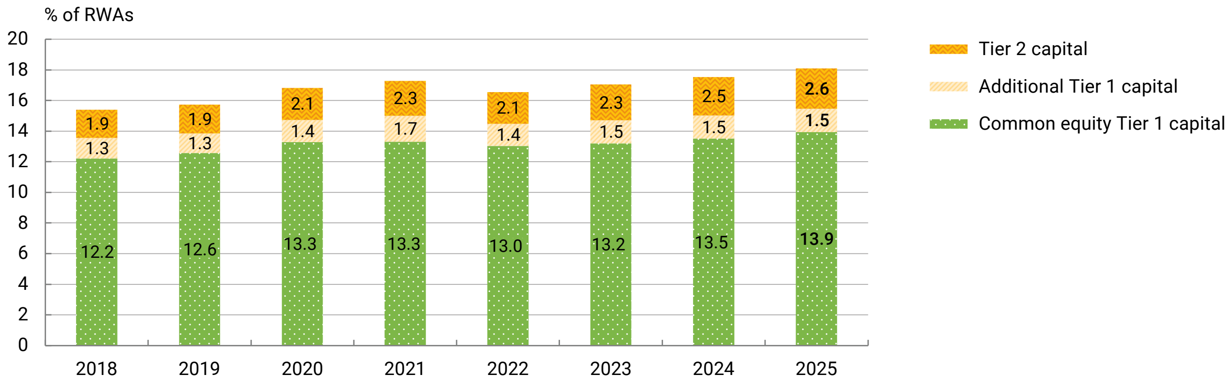
— Spanish banks' common equity tier 1 (CET1) ratio reached an all-time high (13.9%) in December 2025, although it remains below that of their European peers (average of 16.2%). This ratio measures bank solvency as the highest quality capital (shares, reserves, retained earnings) in proportion to risk-weighted assets (RWAs).

— Its positive performance in 2025 is attributable to significant retained earnings and a smaller increase in RWAs.

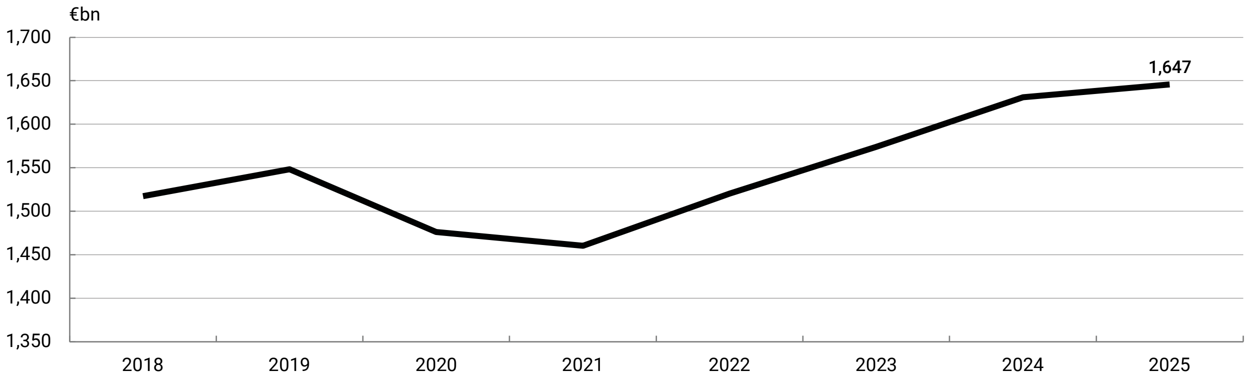
— Capital remuneration, in the form of both dividends and share buybacks, also reached record highs in absolute and relative terms.

Chart 2.8
Capital ratios (capital/risk weighted assets (RWAs))

2.8.a Breakdown of capital ratios



2.8.b RWAs



SOURCE: Banco de España (supervisory statistics on credit institutions).

— The gap in the CET1 ratio compared with European peers is significantly smaller in terms of the management buffer (that is, total capital surplus above the requirements) because of Spanish banks' lower requirements arising from their specific risk profile (lower Pillar 2 requirement (P2R), macroprudential buffers and Pillar 2 guidance (P2G))

2 Supervisory model

2.1 Supervisory model

Since 2014 microprudential supervision of euro area banks has been coordinated under the SSM. Responsibilities are shared between the ECB and the national competent authorities (NCAs), such as the Banco de España, to ensure consistent and effective oversight of the banking sector.

— The SSM is a common framework for the supervision of euro area credit institutions, which are classified as significant institutions (SIs) and less significant institutions (LSIs) based on their size and importance.

— The ECB directly supervises SIs. LSIs are supervised by their NCAs, in Spain by the Banco de España. Nevertheless, the ECB supervises LSIs indirectly to ensure that the criteria applied are consistent across the banking union (see Figure 2.1 for more details).

Figure 2.1
Distribution of supervisory powers over credit institutions

	Tasks assigned to the European Central Bank (ECB) within the Single Supervisory Mechanism	Tasks assigned to the national competent authorities (NCAs) within the Single Supervisory Mechanism
Supervision of significant institutions (SIs)	Direct supervision of SIs.	Support to the ECB for supervision of SIs: participation in joint supervisory teams and on-site inspections.
Supervision of less significant institutions (LSIs)	Indirect supervision of LSIs.	Direct supervision of LSIs.
Common procedures	Common procedures are the responsibility of the ECB, with proposals from the NCAs: the granting and withdrawal of authorisation for credit institutions, and authorisations for the acquisition/sale of qualifying holdings in a credit institution.	Preparation of proposals for SIs and LSIs.
Penalties	SIs: sanctioning powers in the event of non-compliance with directly applicable EU law, except for non-financial penalties and penalties for natural persons. LSIs: sanctioning powers in the event of non-compliance with an ECB decision or regulation.	SIs: sanctioning powers, upon instruction by the ECB, for non-compliance with national legislation transposing EU directives, for infringements attributable to their directors and managers, and for the purpose of imposing non-financial penalties. LSIs: sanctioning powers for all other cases of non-compliance, in some cases upon instruction by the ECB.

SOURCE: Banco de España.

Microprudential supervision of credit institutions is conducted through two complementary channels: ongoing (off-site) supervision and on-site supervision.[1] For more information, see **"The supervisory model in Spain"** on the Banco de España website.

— One of the main off-site supervisory activities is the supervisory review and evaluation process (SREP), whose conclusions incorporate the information compiled in all supervisory tasks. This provides a complete picture of a bank's situation, governance and risk management and control. It also enables supervisors to assess whether a bank has sufficient capital and liquidity to cover its risks.

— The SREP ends with a letter detailing the most important conclusions,[2] urging the affected banks to correct the shortcomings identified and submit plans to remedy them. Joint supervisory teams subsequently check that these remedial measures and plans are implemented.

— Regular stress tests are also conducted to assess banks' preparedness to cope with adverse scenarios (the impact on their solvency is analysed) and other critical situations, such as a liquidity crisis.

The Banco de España is involved in all the decisions taken by the ECB that may affect all, some or just one of the credit institutions supervised by the SSM. It does so through the Director General Banking Supervision, who sits on the Supervisory Board, and the Governor, who is a member of the ECB Governing Council.

— In 2025 the ECB adopted 2,567 decisions, 500 of which affected Spanish institutions: 271 were decisions addressed specifically to those institutions and a further 229 were horizontal decisions for all SSM supervised institutions (Chart 2.9).

— Compared with 2024, the number of ECB decisions and actions concerning Spanish institutions was up almost 13%. There was a notable increase in decisions on supervisory perimeter aspects, primarily authorisations for the acquisition of qualifying holdings; general reviews; and SREP decisions and actions, including those related to stress tests.

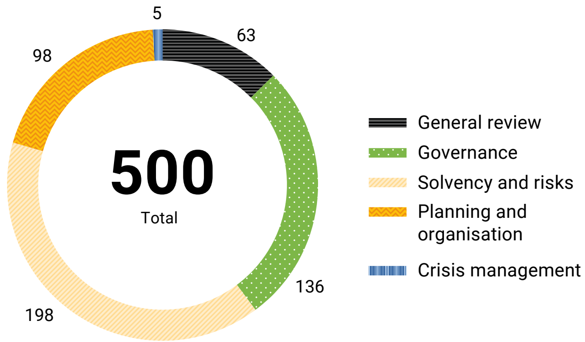
In 2025 the Banco de España, together with the other European supervisors, worked diligently to reform and simplify banking supervision, with a view to making it more streamlined and efficient and focused on the most important risks.

1 Ongoing off-site supervision refers to regular analysis of each bank's financial position (solvency, profitability, liquidity and asset quality), while on-site supervision involves inspections at the banks' headquarters for a more exhaustive review.

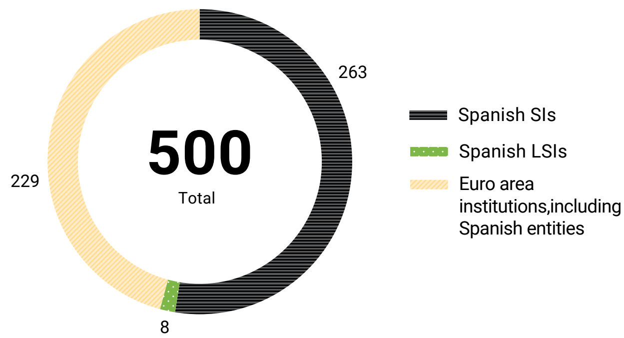
2 In this letter, the supervisor may require that banks hold a volume of capital above the minimum legal requirement; add P2G, which indicates the level of capital the supervisor expects the bank to maintain, in addition to its binding capital requirements, to withstand crisis situations; and include qualitative requirements and recommendations on any other matter where it considers there is room for improvement.

Chart 2.9
Breakdown of ECB decisions and actions affecting Spanish institutions

2.9.a By category



2.9.b By type of institution



SOURCE: Banco de España.

— The reforms, which will be fully implemented in 2026, affect key processes such as the SREP, stress tests and procedure simplification. They also incorporate changes that will allow for clearer and more transparent banking supervision that is tailored to the current challenges without sacrificing robustness.

— In addition, the SSM is working on introducing a regulatory change to apply the principle of proportionality more effectively and consistently in the regulatory framework applicable to small and non-complex credit institutions. Although the current legal framework formally recognises this principle, these institutions continue to face requirements that are disproportionate to their nature, size and complexity.

Outside the remit of the SSM, the Banco de España supervises other types of institutions that provide services or pursue activities linked to the financial system, such as electronic money institutions, appraisal companies and currency-exchange bureaux. The full list can be found in Figure 4.1 in Chapter 4 of this report

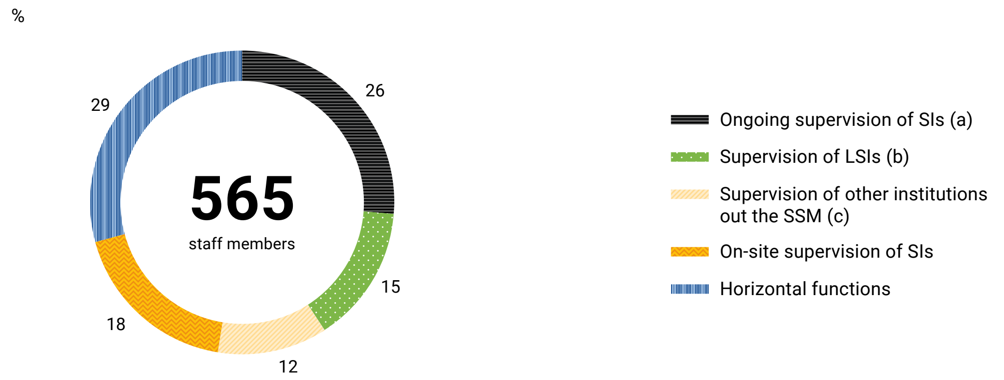
— The institutions on this list are heterogeneous, so the challenges posed vary and the supervisory objectives are adapted to their specific circumstances and situation.

— These institutions are also supervised through a combination of ongoing off-site monitoring and on-site inspections. Both are adapted to the specific features of each institution and to the type of activity they carry out.

2.2 Supervisory staff

Chart 2.10 describes the allocation of staff to the main microprudential supervisory tasks within the Banco de España. Fifteen new members joined during 2025, taking the number of supervisory staff to 565 at year-end.

Chart 2.10
Microprudential supervisory staff, by function (565 members)



SOURCE: Banco de España.

a SI: Significant institutions.
b LSI: Less significant institutions.
c SSM: Single Supervisory Mechanism.

Just under half supervise SIs (26% off-site and 18% on-site), while 29% perform horizontal support functions and the remainder supervise LSIs and institutions outside the SSM.

3 Suptech activities

Priorities under the Banco de España's Strategic Plan 2030 include technological innovation to extract more value from data and make the most of state-of-the-art artificial intelligence (AI) tools. The Strategic Plan's "Leveraging AI and new technologies" initiative is aligned with and based on the supervisory technology (suptech) strategy in banking supervision.

— The suptech initiative is geared to boosting supervisory work and facilitating better informed decision-making. It is based on the use of technologies such as machine learning (which enables systems to learn from data and improve over time) and big data (which makes it possible to analyse large volumes of information to reach conclusions that could not be drawn via traditional methods).

— An independent evaluation of the suptech initiative was conducted in 2023. Overall the experts' opinion was favourable, but they did identify some areas for improvement. Their recommendations led to an action plan and materialised in a suptech roadmap with four pillars. The main progress made in 2025 in each pillar is detailed below.

1 **Developing new suptech tools and enhancing the use of existing ones.** AI use to analyse company news was expanded to incorporate the identification of operational risk events and new visualisations, including data on issuance.[3]

The Directorate General Banking Supervision is working closely with the Banco de Espana's new Applied Technology Laboratory and Experimentation Department (DELTA), which specialises in the development of AI solutions and the adoption of new technologies at the Bank. In addition, technological capabilities for developing AI solutions have been vastly improved and staff have been equipped with AI tools to boost advanced data analysis and efficiency.

The Directorate General also continues to collaborate with the Digital Transformation Office on process automation.

2 **Fostering a culture of innovation** across the Banco de España through an interdepartmental process involving all Banco de España staff to identify areas where AI can add value. Inspectors and analysts participated in the joint design of the solutions that they will use, expanding their technological know-how and ensuring that the solutions are tailored to their work processes, thus benefiting the institution as a whole.

More than 140 ideas were identified in this process, 15 of which were defended before an Assessment Committee composed of members of the Banco de España's governing

3 Both tools were explained in Figure 2.5 of the *Supervision Report 2024*.

bodies and external experts. Two strategic projects were selected in the banking supervision field. These solutions aim to enhance the Bank's comprehensive view of institutions by strengthening data-based supervision and reducing manual tasks. The aim is to let supervisors focus on analysis and decision-making.

3 **Comprehensive training in suptech and AI skills for all staff.** Given that the digital transformation goes hand in hand with the development of in-house talent, training initiatives were stepped up in 2025, with emphasis placed on the banking supervision area.

The Directorate General collaborated with the Banco de España's new Data and AI academies to give specialised training in machine learning and suptech tools at the Bank, at the ECB and in courses organised by the Association of Supervisors of Banks of the Americas (ASBA) for its members.

An internal hackathon, in which supervisors and other Banco de España staff participated to design innovative solutions, was also organised. Multidisciplinary teams analysed advertising for financial instruments to improve the supervision of institutions' conduct, thus fostering creativity, internal collaboration and hands-on learning of new AI techniques. This initiative yielded useful prototypes for supervision and boosted the participants' digital skills, demonstrating the value of open innovation within the Bank.

4 In line with our objective to foster **national and international cooperation,** a document was prepared for ASBA detailing the key principles for designing a suptech roadmap. Collaboration is part of the Banco de España's AI strategy. In this respect, progress has been made via agreements with, for example, the Barcelona Supercomputing Center; the Directorate General has participated in various Eurosystem working groups; and headway is being made on agreements with other central banks to work together on AI systems.

Box 2.1 explains in detail the generative AI programme organised in collaboration with the European Commission, which also included a hackathon to develop innovative solutions and prototypes. This programme, which featured innovation events with experts from other international authorities and strategic sessions for senior management, has helped the Banco de España give impetus to the development of the suptech roadmap's four pillars.

Box 2.1
ADVANCED GENERATIVE ARTIFICIAL INTELLIGENCE TRAINING PROGRAMME

In 2025 the Banco de España, in collaboration with the European Commission, conducted an advanced generative artificial intelligence (AI) training programme.[1] Generative AI is designed to create original content (text, images or software code) by drawing on patterns learned from large volumes of existing data. Unlike other AI models that only classify, predict or analyse, generative AI produces new information by combining what it learned when it was trained.

The aim of this programme was to boost innovation across the Banco de España, implementing the recommendations from the 2023 external evaluation of the use of technological innovation in the prudential supervisory function.

The programme's four pillars are detailed below:

Pillar 1. Advanced training: In early 2025 a four-week intensive course was given to over 40 experts from the Banco de España and other national competent authorities. The speakers were top experts who gave theoretical and practical explanations of key concepts such as:

- *Embeddings:* a way of converting text or images into vectors so that the machine understands them.
- *Transformers:* a type of model that enables the AI to consider context.
- *Agent architecture:* systems that combine various AI models so that they work together and resolve more complex tasks

Pillar 2. Development of proof of concept: A generative AI prototype – that is, an initial version of an idea that could become an actual tool in the future – was developed. This project, conducted alongside the team that provided the training, allowed participants to put the knowledge gained into practice in a case study on audit reports. Two types of tools were compared: proprietary AI (tools created by, and licensed from, vendor companies) and open-source models, which are free of charge and can be tailored to any organisation.

Pillar 3. Collaborative innovation workshop: A two-day innovation workshop was organised with the assistance of the European University Institute. Five teams with members from different countries and fields participated. They collaborated to create prototypes, using state-of-the-art technologies, such as generative AI, network analysis (which maps the relationships between different components as if they were the nodes and threads of a spider's web) and geographic information systems (digital tools that analyse maps and location data). This workshop helped strengthen collaborative ties between different supervisors.

Pillar 4. Strategic meeting with senior management: A meeting was held between Banco de España senior management and international experts to analyse the challenges and opportunities that AI poses for the financial sector and the impact of AI on supervisory functions. Key issues were analysed, including the most disruptive technologies in finance, how to combat disinformation, ethical questions and the creation of innovation ecosystems.

This programme reflects the Banco de España's commitment to innovation, developing its staff's capabilities and collaborating with European institutions.

1 As part of a technical assistance project funded by the European Union and managed by the European Commission's Reform and Investment Task Force.