FINANCIAL STABILITY REPORT

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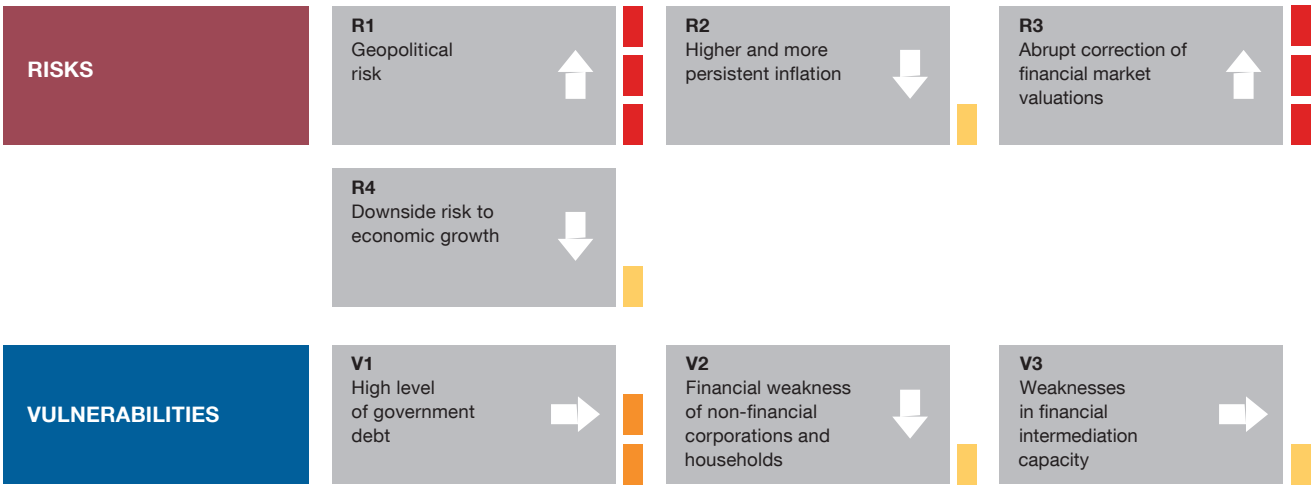
FINANCIAL STABILITY: MAIN VULNERABILITIES AND RISKS

Since the last Financial Stability Report (FSR) was published, the vulnerabilities and risks then identified have evolved unevenly (see Figure 1).

Notably, risks linked to high inflation have decreased significantly across all geographical areas. The risk of lower growth in the short term in Spain has also declined. Amid this more favourable macroeconomic setting, the escalation of geopolitical tensions remains the main risk to financial stability, compounded by the intensification of the conflicts in eastern Europe and the Middle East. Also, the high valuations of some risky financial assets and other factors, such as the concentration of equity market value in only a few technology firms, increase the risk of abrupt financial market corrections. In any event, it is worth noting that the different risks identified interact with each other and that the materialisation of any of them may exacerbate others.

As regards the analysis of vulnerabilities, government debt has continued to decline, although it remains well above the European average. Against this background, an adequate implementation of the recently announced medium-term fiscal-structural plan is necessary to

Figure 1
Financial stability: main risks and vulnerabilities (a) (b) (c)



SOURCE: Banco de España.

a In this report, the **vulnerabilities** are defined as economic and financial conditions that increase the impact or probability of materialisation of **risks to financial stability,** which in turn are identified as adverse changes in economic and financial conditions, or in the physical or geopolitical environment, with an uncertain probability of occurrence, which hamper or impede financial intermediation, with negative consequences for real economic activity.
b The risks and vulnerabilities shown here are measured using the following scale: one yellow block denotes a low level, two orange blocks a medium level and three red blocks a high level. The arrows denote the change in the levels of the risks and vulnerabilities since the last FSR.
c In the last FSR, the R3 risk referred to greater risk aversion among agents, its main component being a possible abrupt financial market correction. In view of its greater relative importance, in this FSR it has been decided to identify the risk as a whole with its main component.

make progress in the application of the new European fiscal rules, reduce the level of structural deficit and ensure the consolidation of public finances in Spain. Households and NFCs have fared well in terms of income and continue to lower their debt ratios, reducing their degree of financial vulnerability.

The Spanish banking sector's financial position remains favourable, with high profitability underpinned by the growth of net interest income and, to a lesser extent, net fee and commission income. However, this has not translated into a significant strengthening of their solvency ratios, with the CET1 ratio remaining comparatively lower than that of other European banking systems. Globally, there is still concern over the high leverage and build-up of liquidity risks at some non-bank financial intermediaries (NBFIs).

The main risks[1] to the stability of the Spanish financial system are discussed in greater detail below:

R1. Geopolitical risks

The regional escalation of the conflict in the Middle East, and the increase in offensive actions in the Russia-Ukraine war heighten geopolitical risks, making it more likely for these conflicts to escalate and spread even further.

The assessment of other sources of geopolitical risk has remained relatively stable since last spring. However, it remains at a high level that requires ongoing monitoring. Particularly significant are the trade tensions between China and the United States and also the European Union. These affect various goods, especially certain technological products (see Chart 1). These are necessary to sustain and make headway in the digitalisation of economic activities and for the transition towards a more sustainable economy, both of which are key for long-term economic growth.

Moreover, the United States presidential election creates uncertainty about the country's policy stance, which has global effects. Foreseeably, the outcome of this election will be the most important geopolitical event in the coming months. In Europe, the outcome of elections in some countries, such as France, is also generating uncertainty about the economic policy stance, giving rise to some tightening in Europe's financial markets.

The possibility of a global intensification of geopolitically motivated cyber attacks remains.

For the time being, the effect of geopolitical tensions on global economic activity remains contained. The diversification of suppliers and the reorganisation of production processes

1 Risks to financial stability are defined as adverse changes in economic and financial conditions, or in the physical or geopolitical environment, with an uncertain probability of occurrence, which hamper or impede financial intermediation, with negative consequences for real economic activity.

Chart 1
Semiconductors. Share of main world exporters (a)

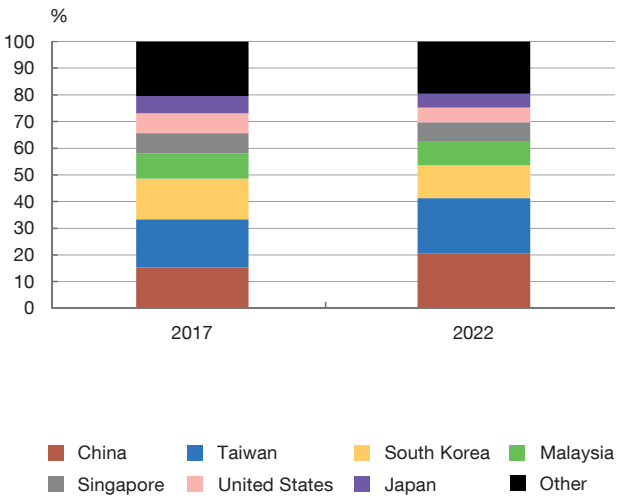
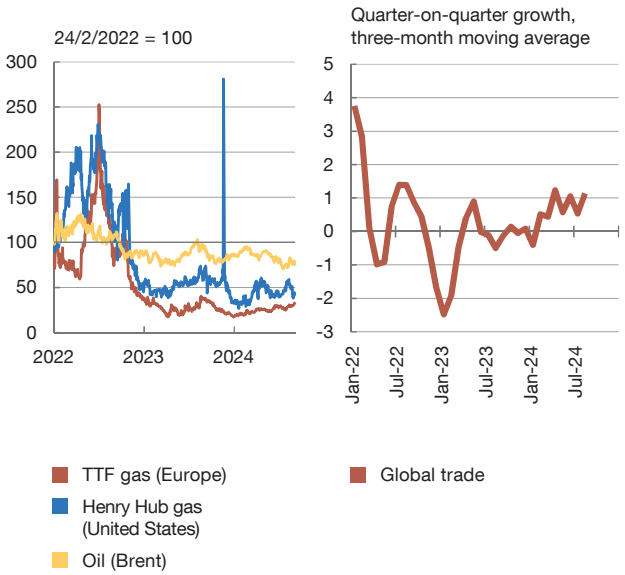


Chart 2
Changes in natural gas and oil prices (b), and in global trade



SOURCES: Centre d'Etudes Prospectives et d'Informations Internationales, Refinitiv Eikon and CPB.

a The data for China are adjusted and do not contain re-exports by Hong Kong of products from mainland China, to avoid double counting of flows.
b The spot prices for the three markets are expressed in euro for comparison purposes.

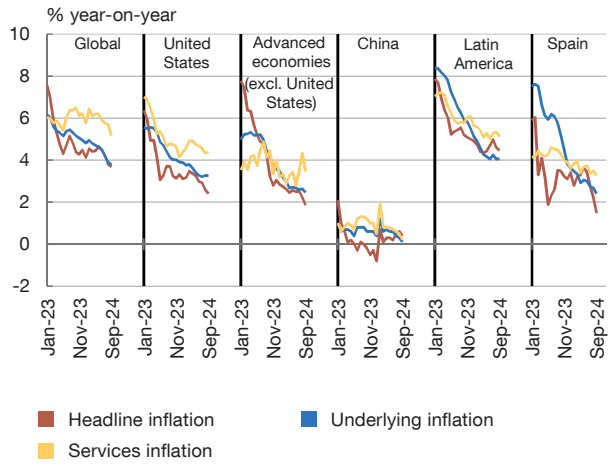
have helped mitigate the impact of various geopolitical shocks (e.g. on Russian energy supplies or on shipping traffic in the Red Sea). The resilience of global trade flows and the absence of energy supply problems are noteworthy (see Chart 2). However, oil prices have seen a recent increase in volatility linked to the Middle East conflict.

However, if a scenario of global escalation of geopolitical tensions were to materialise, stronger negative supply shocks and a broad-based deterioration in investor confidence could arise, with very adverse consequences for global economic and financial activity, as well as for inflation. In particular, inflation could be affected through disruptions in international supply chains, especially of energy and other commodities.

The persistence of geopolitical tensions over an extended period of time also influences public policies (e.g. rising trade protectionism, greater military spending and larger armed forces) and increases the likelihood of a divided world order becoming entrenched. This would reverse the efficiency gains of globalisation, for instance through a broad-based increase in tariffs, and could hamper the ability to absorb future shocks.

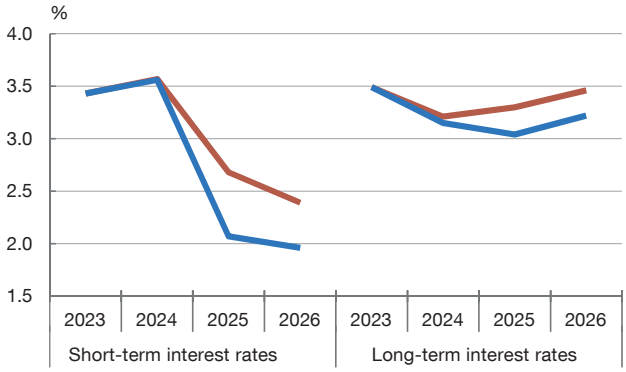
The assessment of other risks in this summary is based on a stable global level of geopolitical tensions, while other shocks that may affect the stability of the Spanish financial system are assessed separately. Box 1.1 analyses more broadly the trade risk channels for the European Union and Spain linked to geopolitical tensions.

Chart 3
Changes in inflation (a)



Headline inflation
Underlying inflation
Services inflation

Chart 4
Expectations of short and long-term interest rates in the euro area (b) (c)



5/4/2024
28/10/2024

SOURCES: National statistics, Refinitiv Datastream, ECB and Banco de España.

a The "Global" aggregate includes the United States, the euro area, the United Kingdom, Canada, Norway, Sweden, Switzerland, the Czech Republic, Poland, Hungary, Russia, Türkiye, Japan, China, India, Indonesia, Malaysia, Thailand and the Philippines, as well as the "Latin America" aggregate (comprised of Brazil, Chile, Colombia, Mexico and Peru). "Services inflation" excludes the Czech Republic, Russia, India, Indonesia, the Philippines and Thailand. The "Advanced economies (excl. United States)" comprises the euro area, Japan, the United Kingdom, Sweden, Switzerland, Norway and Canada.
b For the projection period, the figures are technical assumptions, prepared following the Eurosystem methodology. These assumptions are based on futures market prices or on proxies thereof and should not be interpreted as a Eurosystem prediction as to the path of these variables.
c The date 5/4/24 refers to the cut-off date for the last FSR.

R2. Higher and more persistent inflation

The disinflation process has continued at the global level in recent months, although it has been constrained by persistent inflationary pressures in services (see Chart 3). Despite this, short-term inflation expectations have been revised downwards since April, particularly in the United States, and are consistent with a future prolongation of the disinflationary process.

In the euro area inflation has continued on a downward trend in recent months, temporarily standing below the monetary policy target, as it dropped to 1.7% year-on-year at September 2024. This behaviour is due not only to lower energy and food inflation, but also to a decline in underlying inflation, largely reflecting that the process of monetary policy tightening has kept agents' inflation expectations anchored. In Spain, inflation also stood at 1.7% in September,[2] with broadly similar changes and drivers to those of the euro area as a whole.

In any event, the projections of the European Central Bank (ECB) continue to point to inflation evolving towards the 2% target in the medium term, both in the euro area as a whole and in Spain. Against this backdrop, the Governing Council of the ECB lowered its key interest rates three times (in June, September and October) by 25 basis points (bp).

2 The Harmonised Index of Consumer Prices (HICP) is used to compare changes in inflation in the euro area and in Spain. In Spain, inflation according to the consumer price index (CPI) stood at 1.5% in September.

The Governing Council of the ECB has continued to indicate that possible further monetary policy interest rate reductions will be data-dependent. Since the last FSR was published, market expectations have shifted towards larger rate cuts and consistently towards lower short and long-term interest rates in the euro area (see Chart 4).

Labour markets in the euro area remain buoyant, although there are signs of greater slack and some moderation in wage growth, although this is expected to be sufficient to allow workers to gradually recover the real income lost in previous years. This moderation could be key for containing inflationary pressures in the services sector. However, these remain the main concern in this area for now.

Also still important is the possibility that inflation will be more persistent than expected in the United States, in which case it could adjust its monetary policy rate path upwards, tightening global financial conditions.

Conversely, the materialisation of downside risks to growth, amid some signs of weak global demand, or a potentially greater impact of the current monetary policies could lead to inflation being lower than projected. In particular, slower growth in China could help lower inflation in other economies through various financial and trade channels, mainly owing to its effects on global demand for commodities.

R3. Risk of an abrupt financial market correction

The measures of uncertainty in the financial markets remain at historically low levels (see Chart 5) despite the environment of high geopolitical tensions and the persistence of some risks to inflation and growth.

Likewise, risk premia for various financial assets are at historically low levels. Notably, this is observed not only in the US stock markets, but also in other asset classes, such as both European and US high-yield corporate bonds (see Chart 6).

Persistently high valuations of risky financial assets with the current level of uncertainty may make investors' perceptions fragile. Even in the absence of major shocks associated with geopolitical risks, limited changes in macro-financial conditions may make investors more pessimistic and lead to financial market corrections. This fragility is illustrated by the turmoil in early August (a sharp fall in the value of the equity market in Japan and, to a lesser extent, in other geographical areas).

When assessing financial market risks, the high concentration of the stock market in the technology sector, in particular among a small number of US firms (see Box 1.2), should be taken into account. Thus, shocks to expectations about the value of new technologies (e.g. artificial intelligence) or the ability of various firms to retain the efficiency gains they generate can lead to significant swings in stock market indices.

Chart 5
Changes in equity VIX and credit VIX (a)

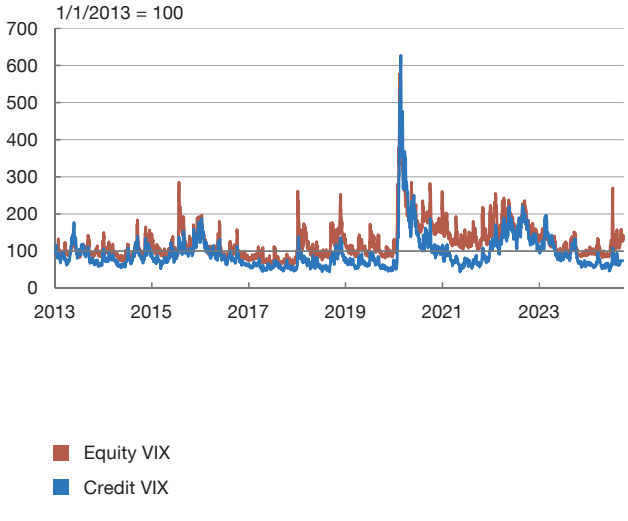
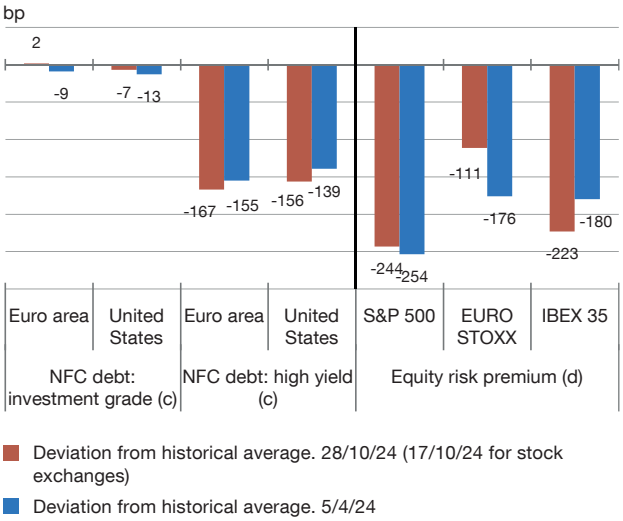


Chart 6
Risk premia (b)



SOURCES: Refinitiv Datastream, Refinitiv Eikon and Banco de España.

a The equity VIX and the credit VIX measure, respectively, the one-month volatility of the S&P 500 index and of the US high yield credit market through the five-year CDX HY index.
b The date 5/4/24 refers to the cut-off date for the last FSR.
c Spreads against the swap curve of the ICE Bank of America Merrill Lynch indices. The historical average refers to the period 1998-2024, and is 78 basis points (bp) for euro area investment-grade bonds, 131 bp for US investment-grade bonds, 448 bp for euro area high-yield bonds and 441 bp for US high-yield bonds.
d The equity risk premium is calculated using a two-step dividend discount model (Russell J. Fuller and Chi-Cheng Hsia. (1984). "A simplified common stock valuation model". Financial Analysts Journal, 40(5), pp. 49-56). The historical average refers to the period 2006-2024, and is 500 bp for the S&P 500, 653 bp for the EURO STOXX and 774 bp for the IBEX 35.

Although technology concentration and other risk factors of financial markets are specifically linked to the United States, the central position of its financial system in global markets and the high degree of interconnectedness between them mean that these factors are globally important.

In a scenario of valuation corrections, as noted in previous FSRs, there is a specific risk of such corrections spreading owing to the procyclical behaviour of NBFIs. In some segments of this sector (e.g. hedge funds, family offices), high leveraging and signs of a build-up of liquidity risks continue to be detected, making their behaviour more sensitive to various shocks.

This scenario of financial market risk materialisation would also adversely affect banks by tightening their wholesale financing conditions.

R4. Downside risk to economic growth

The tempo of global economic activity remains positive overall and somewhat more buoyant than anticipated in the previous FSR (see Chart 7), although some signs of weakness also persist.

Chart 7
GDP growth forecasts (a)

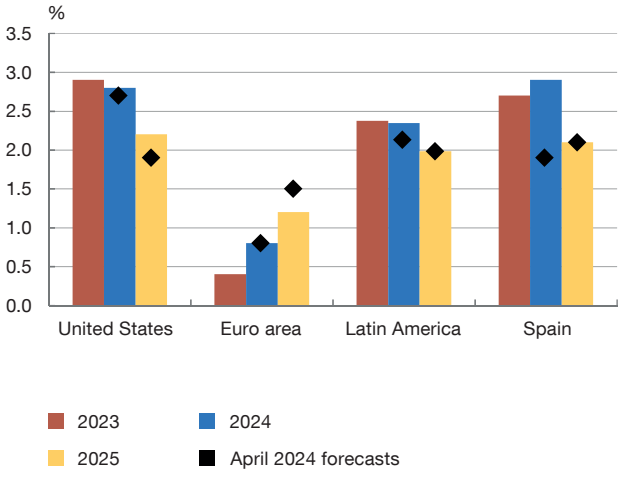
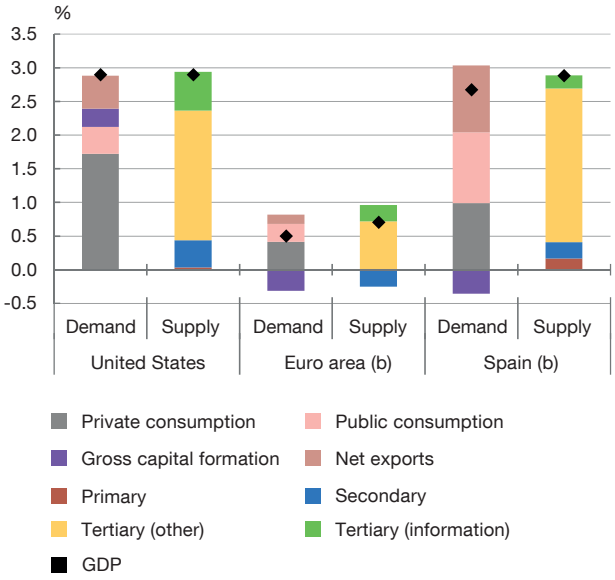


Chart 8
Contributions to GDP growth (2023)



SOURCES: Wolrd Economic Outlook (IMF) and national statistics.

a The bars represent the IMF's October 2024 World Economic Outlook (WEO) forecasts. The diamonds correspond to the April 2024 forecasts. WEO aggregates except for Latin America (Brazil, Chile, Colombia, Mexico and Peru).
b The supply contributions explain the growth in gross value added, without taxes, so that they do not coincide exactly with the contributions on the demand side.

Economic activity in the euro area remained weak in 2024 H1. A slow and gradual recovery is expected, albeit somewhat weaker than envisaged last spring, with growth projected to remain, in any event, at low levels in the medium term.

Short-term indicators point to weaker momentum in Q3 in certain geographical areas, and recent data suggest a global slowdown in manufacturing activity and resilience in the services sector.

The Spanish economy maintained strong momentum in 2024 H1, with growth clearly above that observed in the euro area as a whole. In addition, the estimates for the years immediately following the pandemic were revised upwards, with pre-pandemic GDP levels recovered significantly sooner. Spanish GDP growth in recent quarters has been underpinned by net exports, owing to the strength of exports – especially those of travel services – and the slight decline in imports. Domestic demand surprised on the downside, mainly on account of the continued relative weakness of private consumption and gross capital formation.

The latest economic data suggest that the pace of activity growth in Q3 in Spain may have edged down from H1, but remains high.

Even in the absence of escalating geopolitical tensions (this being the most extreme case, as discussed previously), the materialisation of the financial market risks identified and, in some

cases, inflation risks (e.g. higher monetary policy interest rates in the face of more persistent inflation) could also prompt tighter financial conditions and entail downside risks to activity.

Furthermore, the weakness of real GDP growth in some European economies and the insufficient effectiveness of the stimulus measures announced in China could have an impact on economic activity in Spain through various trade and financial channels. Also, the high level of government debt in the United States continues to pose a risk to global economic activity. This is due not only to that economy having less fiscal space, but also because this high level of government debt is conducive to an environment of higher long-term real interest rates, which could be accompanied by bouts of uncertainty in the financial markets.

Compliance with the new European fiscal rules may hinder growth somewhat over the coming years, but will help strengthen the sustainability of public finances. There are certain mitigating factors for these risks to activity. First, a less restrictive monetary policy in the major world economies would provide more support to growth in the short term. Second, at the domestic level, the high household saving rate and the impact of Next Generation EU (NGEU)-related projects may support consumption and investment, respectively.

Lastly, also at the domestic level, it is worth noting that the current composition of growth may be a persistent vulnerability for the Spanish economy even if the current expansionary path takes hold and short-term risks to activity dissipate (see Chart 8). On the expenditure side, GDP growth has been sustained to a significant extent by external demand for services, especially tourism, and government consumption, in contrast to a lower contribution from private consumption and, in particular, business investment. As regards sectors of activity, the contribution to growth of low productivity sectors (e.g. hospitality) is high.

In this setting, the main vulnerabilities[3] of the Spanish economy and financial system include:

V1. High level of government debt

The budget deficit in cumulative 12-month terms is estimated to have stood at 3.3% in June, down 0.2 pp from end-2023. The government debt-to-GDP ratio fell by 3.5 pp year-on-year, essentially because of the increase in nominal GDP, to stand at 105.3% in 2024 Q2. This level of government debt is some 20 pp below the peak following the start of the pandemic in March 2021, although it is also approximately 18 pp above the euro area aggregate (see Chart 9).

The average cost of new debt issuance was 3.3% in the first eight months of 2024, down 0.2 pp from its average 2023 level. The average cost of the most recent issuance, in September, was 2.9%, reflecting the prospects of less monetary restriction. However, the progressive increase in the average cost of outstanding debt is expected to continue, insofar as the

3 In this report, vulnerabilities are defined as economic and financial conditions that increase the impact or probability of materialisation of risks to financial stability.

Chart 9
Public sector debt in the euro area

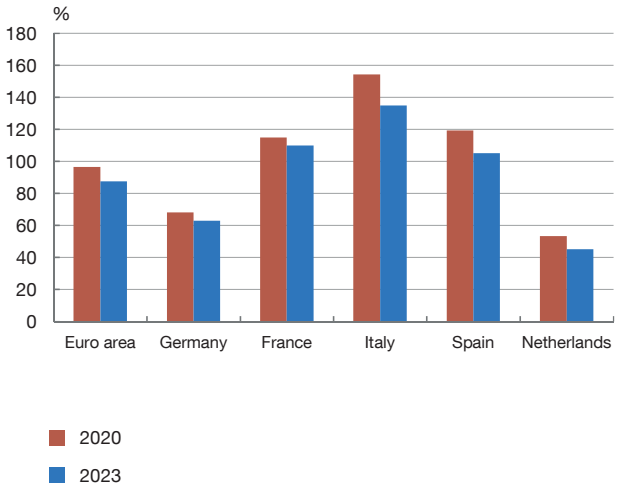
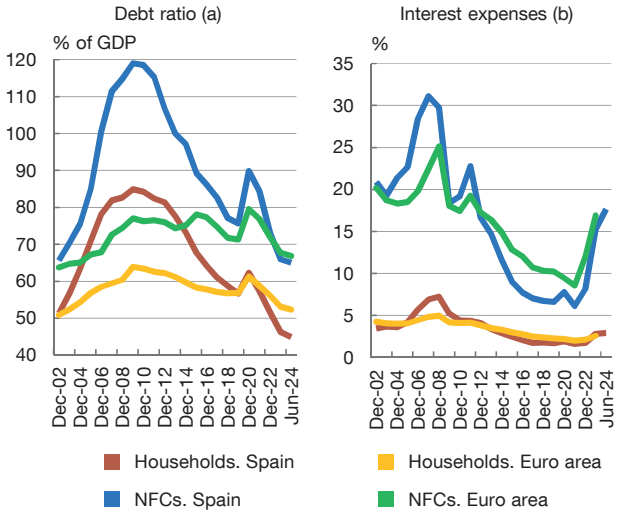


Chart 10
Debt ratio and interest expenses of households and NFCs



SOURCES: Eurostat, INE and Banco de España.

a Debt balances are seasonally adjusted.
b Interest expenses are not adjusted for financial intermediation services indirectly measured (FISIM). Seasonally adjusted quarterly series. The ratio for households is calculated by dividing interest expenses by GDI and for NFCs by GOS.

average term to maturity of Spanish government debt is about eight years and issuance between 2016 and 2021 was at rates below the current levels and those expected by financial markets for the coming years.

If the new European fiscal rules are not applied, the path of government debt and interest payments will be moderately upward over the next few years. This is because of the large structural component of the Spanish budget deficit and certain factors that will place upward pressure on public spending, such as population ageing, climate change-related investment needs, digitalisation and defence spending.

It should not be forgotten that the high level of government debt increases the sensitivity of spending to changes in market financing conditions. If we also bear in mind the need to generate fiscal space to mitigate the impact of possible adverse shocks, it appears to be absolutely essential that the fiscal consolidation plan recently announced in Spain, along with certain structural reforms, be implemented rapidly and rigorously in order to resolve this vulnerability and minimise its impact on activity. This is especially important insofar as the plan proposes a timeline of decreasing growth in spending. This facilitates its achievement in the early years when a more favourable cyclical position is assumed, but means that it becomes more restrictive towards the end of the adjustment period.[4]

4 On 15 October, the Government presented its first medium-term fiscal-structural plan which proposes a linear structural adjustment of 0.4 pp of GDP per year for seven years. Given the macroeconomic assumptions of this plan, it translates into a downward trajectory for net primary spending throughout the adjustment period (2025-2031).

V2. Financial weakness of non-financial corporations and households

In the first half of 2024, Spanish non-financial corporations reported favourable earnings developments, while continuing to reduce their debt relative to GDP. This has led to a reduction in their financial vulnerabilities.

Corporate earnings performed well in the first half of 2024, although there was cross-sector heterogeneity. According to information from the tax authorities, the gross operating profit (GOP)[5] of the non-financial corporate sector increased in nominal terms by 6.5% year-on-year in 2024 Q1, and by 9.2% in Q2.

Meanwhile, the data from the Banco de España Business Activity Survey (EBAE) for Q3 show a decline in inflationary pressures on selling prices and intermediate input and labour costs. Also, more favourable conditions are identified in terms of access and cost of funds. Concerns persist however over the uncertainty surrounding economic policies, the availability of labour and possible energy cost surges.

Against this background, the consolidated debt of Spanish non-financial corporations increased by 1.3% year-on-year in June 2024. However, the debt of this sector stood at 65% of GDP in Q2 (see Chart 10), down 3.6 pp from 12-months earlier, and the lowest level of the series since September 2002. In addition, this ratio was 1.8 pp below the sector average for the euro area as a whole, which stood at 66.8% in the same period.

The financial vulnerabilities of households also decreased, driven by the resilience of employment, the growth of gross disposable income (GDI) and the decline in their debt relative to GDP.[6]

Specifically, the unemployment rate according to the Spanish Labour Force Survey (EPA) stood in June 2024 at 11.3%, down 0.4 pp from twelve months earlier, a rate not observed since 2008 Q3. In this context, real household GDI[7] grew at an average year-on-year rate of 3.8% (as against 4.4% in the previous six months), and stands at 2.8% above its level prior to the pandemic.[8] The volume of household debt increased in Q2, the first rise since summer 2022, while gross household wealth continued to climb. The higher growth in income than in debt levels meant that the household debt ratio fell to 44.9% of GDP in 2024 Q2, a level not seen since 2000 and 7.5 pp below the euro area average.

Despite these positive income and debt developments, the average cost of debt and the debt burden of households and non-financial corporations remain at relatively high levels in

5 GOP is obtained by deducting intermediate consumption (costs of production and other operating expenditure) and personnel costs from output (sales and other operating income).

6 Household indebtedness relative to GDI displays a similar pattern.

7 GDI includes compensation of employees, the gross operating surplus and gross mixed income, property income and net transfers received (state benefits less taxes and social security contributions). Real income is calculated by applying the private consumption deflator to the nominal values. In June 2024, the number of households grew by 0.8% year-on-year.

8 In seasonally adjusted terms.

comparison with the low rate period following the global financial crisis. The progressive adjustment of monetary policy and the rate reset periods in variable rate contracts mean that the decline in the debt burden of these sectors can be expected to take place gradually, so that indebted agents will be subject to some degree of vulnerability in the short term.

Specifically, the debt burden ratio (interest expenses divided by the gross operating surplus) of non-financial corporations increased in 2024 Q2 to 17.7%, up 5.3 pp from the figure recorded 12 months earlier, and the highest level of this metric since 2012 (see Chart 10, right-hand panel). The proportion of vulnerable firms in the Central Balance Sheet Data Office Quarterly Survey (CBQ) did not change significantly in the period to June 2024, with uneven behaviour among the various financial fragility indicators (e.g. losses, high debt burden). In any event, these indicators stand below the average level observed over the period 2014-2023.

In the case of households, the aggregate debt burden (financial costs divided by GDI) stood at 2.9% in June 2024, with a year-on-year increase of 0.5 pp (see, again, Chart 10, right-hand panel). This debt burden level is the highest in the series since 2014.

Favourable income developments continue to contain the increase in the proportion of households with a high gross debt burden (over 40% of household income). However, inflation in this period, in particular the cost of consumer staples such as food and energy, has put further pressure on their ability to meet their financial commitments.

V3. Weaknesses in the financial sector's intermediation capacity

The profitability of the Spanish banking sector continued to increase in the first half of 2024, with the ROA (return on assets) standing at 0.91% and the ROE (return on equity) at 13.9%, up 16 bp and 2.2 pp respectively from June 2023.

The monetary policy rate hikes led to a general increase in European bank profitability, with Spanish banks significantly more profitable than the average. This positive differential in the profitability of Spanish banks has not translated into an improvement in their relative position in terms of the CET1 solvency ratio (see Chart 11). The favourable profitability forecasts would help to strengthen bank solvency and compliance with additional capital requirements, such as the activation of the countercyclical capital buffer (CCyB) for exposures in Spain, as described below.

The various components of bank profit have displayed the same qualitative pattern of change as in 2023: profitability has been driven mainly by the marked growth in net interest income, and by a more moderate contribution from net fee and commission income and other gross income items. Together these two components more than offset the poor performance of other items, such as impairment charges. The latter continue to post contained growth despite the sharp rise in key policy rates since 2022. Operating expenses continued to rise in an inflationary setting, and the levy on lending in Spain continued to absorb a limited part of profitability (in its absence,

Chart 11
ROE and CET1 ratio. European comparison (a)

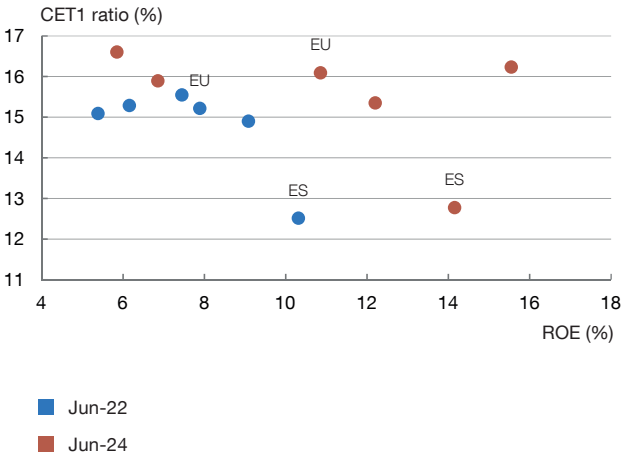
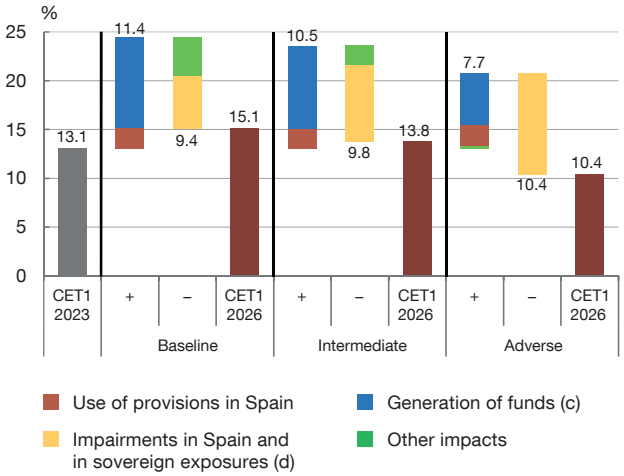


Chart 12
FLESB stress tests. Impact on CET1 ratio under different scenarios (b)



SOURCES: EBA and Banco de España.

a The dots correspond to the values observed in the main European banking sectors (Germany, Spain, France, Italy and the Netherlands) and the average for banks in the European Union. The latter is identified individually (EU), as is Spain (ES).
b The net effect of the positive (negative) flows is indicated in the data label above (below) the corresponding bar. The initial CET1 ratios (13.1% in 2023) and final CET1 ratios (projected for 2026 under each scenario) reflect the fully-loaded basis. Other impacts include, among other effects, the change in RWAs between 2023 and 2026, and the effect of ICO guarantees. Aggregate results, including institutions under the direct supervision of both the SSM and the Banco de España.
c This variable includes net operating income in Spain and net income attributable to business abroad. Thus, the funds that the banking group as a whole may generate are compared with the impairment losses in Spain and on the sovereign portfolio (the focus of these tests).
d This variable shows the projection over the three years of the exercise of gross losses due to credit portfolio impairment for exposures in Spain and other types of losses (associated with the fixed-income portfolio, the management of foreclosures and the sovereign portfolio).

the ROA in June 2024 would have been 4 bp higher, at 0.95%, and the ROE 0.6 pp higher, at 14.5%). In terms of risk weighted assets (RWA) as at June 2024 the levy amounted to 0.11%.

Looking ahead, insofar as the forecast scenarios are concerned, the impact of the reduction in interest rates on bank profitability is expected to be limited and gradual. This is because the potentially adverse effects on unit profits will be at least partially offset by more favourable developments in the volume of business and impairment charges, and banks have various interest rate management instruments. In fact, the results of the Banco de España's stress tests[9] show that the Spanish banking sector would retain organic capital generation capacity under the scenarios in question (see Chart 12).

In contrast, the materialisation of the identified macro-financial risks would significantly reduce the sector's profitability. Indeed, the results of the stress tests indicate that under the most adverse scenario (with intense materialisation of multiple risks, see Box 2.1) a certain amount of capital depletion would occur (see Chart 12). These results point to notable resilience on the part of the Spanish banking sector at the aggregate level. However, the reduction in their

9 These tests are conducted in accordance with the top-down Forward Looking Exercise on Spanish Banks (FLESB) methodological framework, developed and implemented in a centralised way by the Banco de España. See Box 2.1 for further details of the framework and of the latest results.

solvency under this adverse scenario would limit their intermediation capacity and would make a certain degree of deleveraging likely. This would also occur, albeit less intensely, under scenarios in which systemic risks materialise less fully.

Under these less extreme risk scenarios, in which a lower number of risks materialise and they do so less strongly, the profitability of the Spanish banking sector would also be reduced, although by a much smaller amount. For example, the stress test exercises have examined a resurgence of inflation with a negative effect on activity, although without a significant recession or a marked correction in the financial markets, as occurs under the most severe case. Under this intermediate scenario, no reduction in the CET1 solvency ratios is observed, which reinforces the diagnosis of reduction in the level of inflation-linked risks (see risk R2).

Also, Spanish banks have a comfortable liquidity position, with a liquidity coverage ratio (LCR) of 185.7% in June 2024, well above the requirement of 100%, and are not facing funding pressures, with loan-to-deposit ratios of 97.3% and 79.9% at consolidated level and for business in Spain. All of this limits the likelihood of shocks to profitability translating into liquidity and funding stress.

As already mentioned at the beginning of this summary, concerns persist at global level over tight liquidity positions and the leverage of some NBFIs (e.g. hedge funds and family offices). Also, the expansion of the NBFI sector means that it is increasingly important for financial stability, while it remains necessary to further develop their macroprudential framework, which needs to be sensitive to the heterogeneity of the intermediaries that make up this sector. Improving the information available on NBFIs and the interconnections between them is a crucial step in this respect.

Real estate market developments

The monetary policy tightening cycle initiated in mid-2022 led to a reversal of the expansionary trend in activity and acceleration in house prices observed from 2021 after the pandemic. Thus, in 2022 Q4 and 2023, double-digit year-on-year declines were recorded in volumes of purchases and new mortgages, while the growth in house prices slowed from a peak of 8.5% in 2022 Q1 to around 4% at the end of 2023.

Since 2023 Q4, increased housing market activity has been observed, as the moderating effects of the high interest rate environment have tailed off. House purchases and the flow of new mortgages have strengthened, approaching in mid-2024 the high levels reached in 2022. At the same time, house prices have accelerated, reaching a year-on-year growth rate of 7.8% in Q2. There has also been notable growth in the cost of housing rental, which will help to sustain prices in the housing market. The price of commercial property has also recovered somewhat, with year-on-year growth of 3.8% in 2024 Q2, as against the reductions seen in 2022 and 2023.

Chart 13
Indicators of house price imbalances (a) (b)

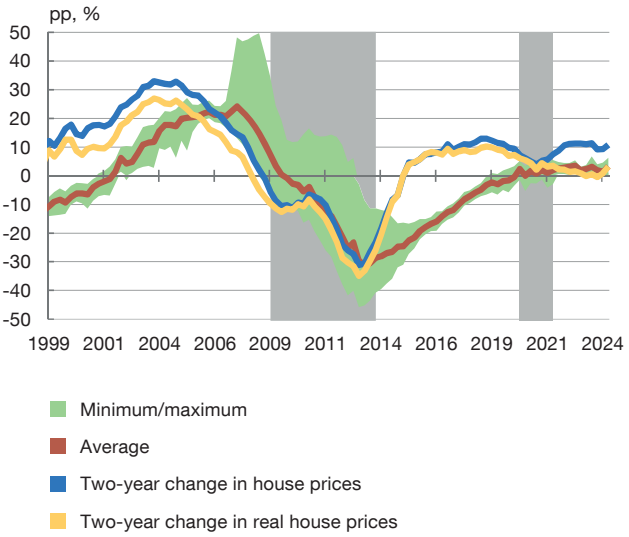
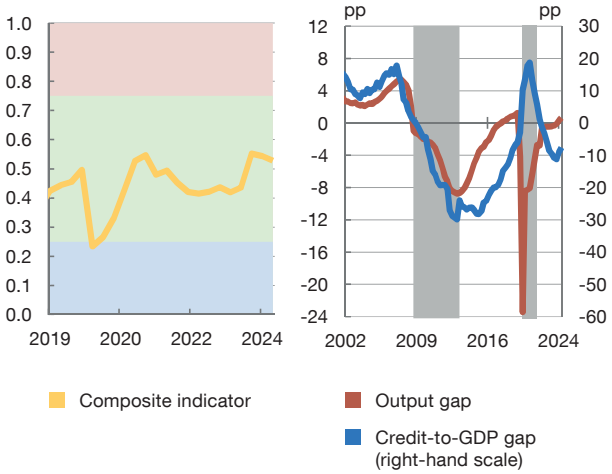


Chart 14
Composite indicators, and credit-to-GDP and output gaps (a) (c)



SOURCES: Banco de España and INE.

a The vertical grey shaded areas indicate two crisis periods identified in Spain since 2009: the last systemic banking crisis (2009 Q1-2013 Q4) and the economic crisis triggered by the COVID-19 pandemic (2020 Q1-2021 Q4). Data updated as at June 2024.

b The green shaded area denotes the minimum and maximum values of four indicators of house price imbalances: (i) the real house price gap; (ii) the house price-to-household disposable income ratio gap; (iii) the ordinary least squares (OLS) model that estimates house prices based on long-term trends in household disposable income and mortgage rates; and (iv) the error correction model that estimates house prices based on household disposable income, mortgage rates and fiscal effects. The long-term trends for indicators (i) to (iii) are calculated using a statistical one-sided Hodrick-Prescott filter with a smoothing parameter equal to 400,000. All four indicators have an equilibrium value of zero. The two-year cumulative price growth in nominal and real terms is also included.

c The composite indicator is defined on a scale from 0 to 1 based on the percentile of its historical distribution. The blue (green) [red] range indicates a low (standard) [high] level sign of cyclical systemic risks. The output gap represents the percentage difference between observed GDP and its quarterly potential level. Values calculated at constant 2010 prices. See Pilar Cuadrado and Enrique Moral-Benito. (2016). "Potential growth of the Spanish economy". Documentos Ocasionales, 1603, Banco de España. The credit-to-GDP gap is calculated as the percentage point difference between the observed ratio and its long-term trend calculated by applying a one-sided statistical Hodrick-Prescott filter with a smoothing parameter of 25,000. This parameter is calibrated to the financial cycles historically observed in Spain. See Jorge E. Galán. (2019). "Measuring credit-to-GDP gaps. The Hodrick-Prescott filter revisited", Documentos Ocasionales, 1906, Banco de España.

Population growth – largely associated with migration – and favourable developments in employment and Spanish household income have helped drive the demand for rented and owned housing. The demand for owned housing of non-residents has also been notably vigorous. Given the relatively inflexible supply of housing and the use of a growing proportion of it for tourism rather than residential purposes (due to the expansion of non-hotel tourism), the boom in demand has pushed prices upwards, as described above. The favourable performance of household income has, however, prevented the emergence of notable price imbalances (see Chart 13).

Up until now, significant loosening of mortgage lending standards relating to the value of collateral or income has not been detected. In fact, in 2023 and in the first half of 2024 there were reductions in loan-to-income (LTI) and loan service-to-income (LSTI) ratios in new mortgage loans, which implies less risk taking in this area. However, the loan-to-value ratio increased in the first half of 2024 relative to its average level in 2023, which entailed only a slightly riskier standard according to this metric.

The interest-rate spreads applied to new mortgage lending (as compared with the market benchmarks) remain low, despite the year-on-year increase in spreads observed to June 2024. The increase in the average cost of bank funding and the decline in benchmark interest rates have brought their levels closer into line, reducing the ability to set the rates on mortgages and other loan products at lower levels relative to benchmark rates and, at the same time, to generate a positive interest margin. In any event, these still narrow spreads appear to reflect, among other factors, the high level of competition in this segment and expectations of lower interest rates in future. If these expectations are dashed then the profitability of these transactions will be reduced.

The progressive lowering of interest rates will foreseeably stimulate the expansionary trend in the housing market, which could spread to the real estate market as a whole, so it will need to be closely monitored.

Macroprudential policy stance

The Banco de España has approved a CCyB requirement of 0.5% of risk-weighted assets for exposures located in Spain from 2024 Q4 (effective in 2025 Q4). This instrument has been activated as a result of a review of the framework for setting the CCyB approved in 2024 Q4.[10] This new framework means that, from now on, banks will have to maintain a releasable buffer of 1% when cyclical systemic risks are at an intermediate level, as they are perceived to be at present (see Chart 14). This modification, which follows the recommendation of the main international and European organisations, will help banks continue to provide financing to the Spanish economy, even in adverse situations, thereby contributing to its stability.

Since the last issue of the FSR, the activation of the systemic risk buffer (SRB) for credit exposures located in Portugal and Italy should also be noted. This was the result of the reciprocal application of measures relating to this buffer activated by the macroprudential policy authorities in these countries. The impact of these reciprocal measures on consolidated capital requirements is very moderate, but their activation will contribute to consistent and efficient application of macroprudential policy in the banking union.

10 See methodological document on the revised CCyB framework for exposures located in Spain and also Estrada et al. (2024) "Analysis of cyclical systemic risks in Spain and of their mitigation through countercyclical bank capital requirements" with further technical details on different analyses applied to assess and calibrate the revision of this framework.

1

RISKS LINKED TO THE MACRO-FINANCIAL ENVIRONMENT

1 RISKS LINKED TO THE MACRO-FINANCIAL ENVIRONMENT

Global economic activity has remained robust since the last *Financial Stability Report* (FSR), although some loss of momentum was detected during the summer months. The Spanish economy, in contrast to that of the euro area, has shown considerable strength, with both GDP estimates for previous years and growth forecasts being revised up. While the disinflation process has continued, the services inflation component has again exhibited a degree of downward stickiness in some economies, including the euro area and Spain.

Despite this relatively benign scenario, downside risks to global, European and Spanish economic growth persist. These risks primarily stem from geopolitical tensions and uncertainty regarding economic policy stances, which could lead to trade and financial fragmentation. Weakness in the Chinese economy or changes in global financial conditions could also shape the course of the global economy. Spain faces additional uncertainty associated with weak consumption and investment, the sectoral make-up of economic growth and the fiscal adjustment path that may be required to comply with European fiscal rules.

The world's main central banks, with a few exceptions such as the Japanese central bank, are starting to loosen their tight monetary policy stance. Meanwhile, financial markets have revised down their interest rate expectations. The scenario remains one of compressed risk premia and high equity prices, particularly in the technology sector. Such market valuations are consistent with a benign macroeconomic scenario and a very strong corporate earnings performance. However, a significant downward revision of earnings forecasts for certain firms or any adverse macroeconomic events that alter agents' expectations could trigger abrupt corrections, such as the very brief episode seen in early August. The role of some non-bank intermediaries could also exacerbate such declines.

Prices in the Spanish residential real estate market climbed at a faster pace, fuelled by strong demand, amid supply-side rigidity and a growing share of properties being used for holiday lets. Prices in the commercial real estate sector have recovered somewhat, supported by the commercial and industrial premises segments.

Both households and non-financial corporations continue to face high interest expenses. However, the lower interest rate outlook, coupled with resilient employment and growing incomes in both segments, continue to mitigate the financial risks. Public finances have improved somewhat, underpinned by GDP growth. However, government debt is high and remains an element of vulnerability, necessitating the strict implementation of the consolidation plan that was recently announced.

1.1 Macroeconomic environment

The global economy continued to follow a robust growth path in 2024 H1, a trend that is expected to persist in H2, despite some signs of weakness from the most recent indicators. Global economic activity proved more resilient than expected in 2024 H1, with some cross-region heterogeneity. However, weak domestic demand in China and sluggish global manufacturing suggest reduced momentum in H2, despite the stimulus measures announced in China (see Chart 1.1.a). Set against an improving inflationary outlook and easing monetary conditions, these signs of weakness have not substantially fed through to growth forecasts for 2024 and 2025 (see Chart 1.1.b).

Given the modest pace of economic growth in the euro area, the GDP recovery projected for 2025 is likely to be somewhat less robust than anticipated a few months ago. Net exports have been the main engine of growth to date. However, in the coming quarters a strong services sector is expected to take over as the primary driver of GDP growth, which will remain moderate. This would be underpinned by stronger private consumption, set against a robust labour market, a recovery in purchasing power and the impact of past interest rate hikes gradually fading, which would mean a progressive increase in real disposable income.

In Spain, conversely, the pace of GDP growth surprised on the upside in 2024 H1. The relative strength of Spain's economic activity compared with the euro area is likely due to a combination of various factors, such as the relative resilience of its manufacturing compared with other European countries and, above all, the large contribution made by net exports. This demand growth has not been stymied by productive capacity constraints thanks to robust migration inflows. Moreover, the upward revision of past GDP figures resulted in an earlier than anticipated return to pre-pandemic activity levels.

Economic growth is expected to remain high in Spain for the remainder of the year, albeit at somewhat more moderate levels. Looking ahead to the coming quarters, the (more gradual) economic growth will primarily be driven by domestic demand, underpinned by the same factors as identified for the euro area, in addition to the mobilisation of NextGenerationEU (NGEU) funds and resurgent export demand, particularly from Europe. Consequently, growth forecasts for Spain were revised up in September, compared with both those of the last FSR and the June projections[1] (see Chart 1.1.b).

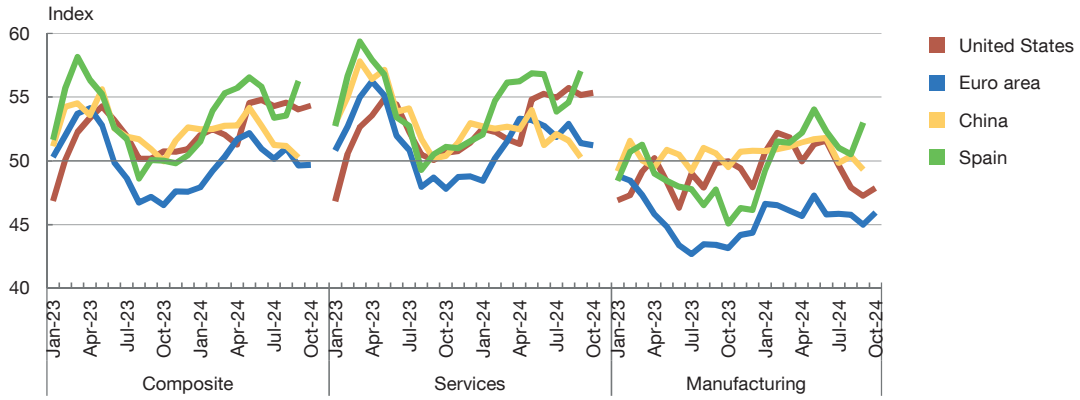
Inflation rates have remained on a moderating path in the recent period. The disinflation process has continued in most regions, although services inflation continues to exhibit some downward rigidity. Short-term inflation expectations indicate that this moderating trend will continue in nearly all regions (see Chart 1.1.c). In the euro area, the inflation rate stood at 1.7% in September, while inflation in Spain (as measured by the harmonised index of consumer

1 *Macroeconomic projections and quarterly report on the Spanish economy. September 2024.*

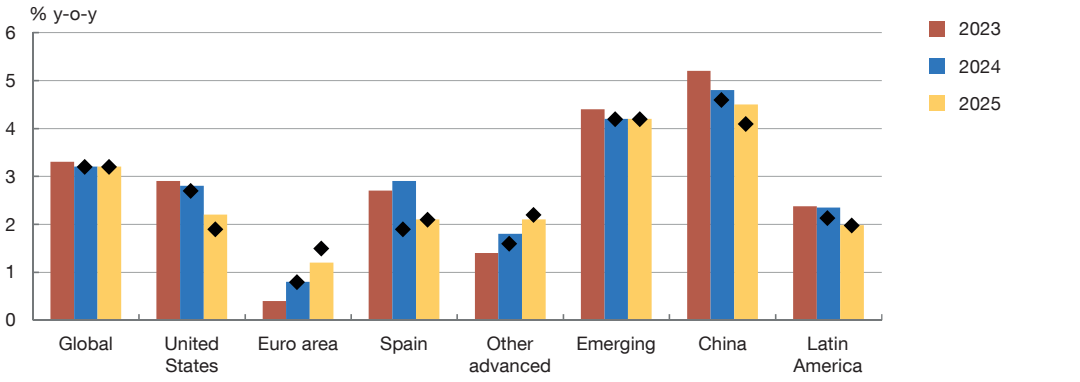
Chart 1.1

Global growth shows signs of stabilising, against a backdrop of global disinflation

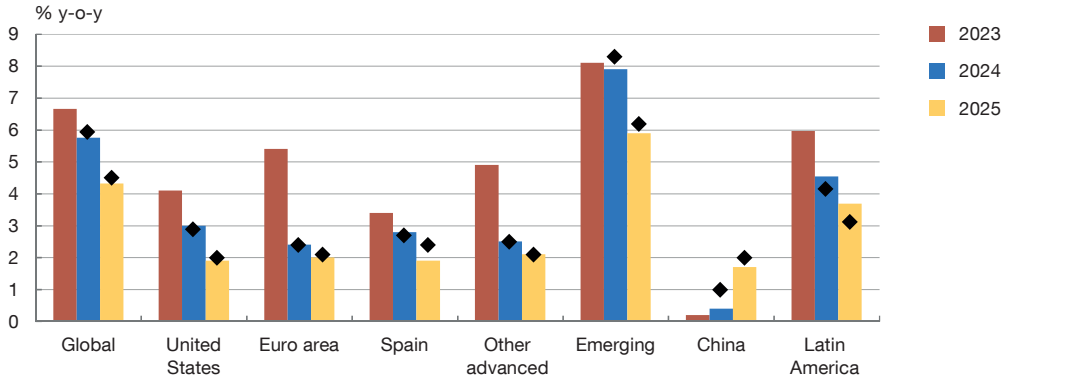
1.1.a Purchasing managers' indices (a)



1.1.b GDP growth forecasts (b) (c)



1.1.c Inflation forecasts (b) (c)



SOURCES: IMF and S&P Global.

a A reading above (below) 50 indicates economic expansion (contraction).
b The bars represent the WEO October 2024 forecasts. The diamonds represent the WEO April 2024 forecasts.
c WEO aggregates except Latin America (Brazil, Chile, Colombia, Mexico, Peru).

prices) fell to 1.7%, its lowest level since spring 2021. Underlying inflation rates also declined, but stand above headline rates, at 2.8% and 2.7%, respectively.

The recent sharper than expected drop in inflation is largely attributable to energy prices. This easing has been aided by the drop in oil prices (down by almost 14% since April, to $71 per

Brent barrel), amid lower demand for crude worldwide. Looking ahead, it is important to bear in mind that energy commodity prices are prone to bouts of volatility and spikes when geopolitical tensions flare. For instance, the escalation of the Middle East conflict pushed Brent oil prices to just over $80 per barrel in October, although this movement reversed rapidly and weak demand has been more important in its evolution afterwards.

Persistently high services inflation could slow the disinflationary process going forward and shape monetary policy decisions. In any event, wage growth shows signs of moderation, mitigating this risk.

The balance of risks to global economic activity remains on the downside, as a result of persistent geopolitical tensions and economic policy uncertainty. These factors could lead to global trade and financial fragmentation. An escalation of the Middle East conflict or of the war in Ukraine could lead to surging commodity prices or shipping costs, or to a return of global bottlenecks. The outcome of the US election adds a further layer of uncertainty, particularly considering the potential implications for trade relations with other regions, especially China, where a deterioration could lead to further fragmentation of the world economy (see Box 1.1). High US debt and uncertainty surrounding the fiscal policy path due to the presidential elections add another layer of risk to financial markets, and is currently reflected in higher real long-term interest rates, increasing the probability of further rises. The materialisation of these risks could raise inflation rates, tighten global financial conditions and harm the growth outlook.

The weakness of China's real estate market, which is in a pronounced downturn, continues to pose a downside risk to global activity and inflation. A more severe deterioration in the housing market or further distress at major real estate developers would adversely affect China's growth and feed through to the world's major economies via the trade and uncertainty channels. The recent measures announced by the Chinese authorities (monetary policy easing, mortgage loan renegotiation and an injection of funds to stimulate the stock market) helped to alleviate the risks somewhat and were welcomed by the markets, although there are still doubts over their effectiveness in reviving growth.

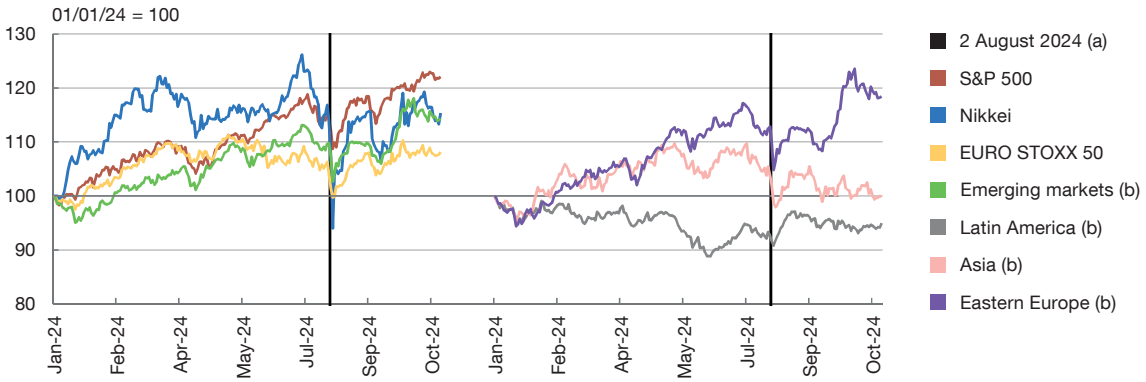
The potential for abrupt corrections in global financial markets adds further downside risks to global economic growth. The high valuations of risk-bearing assets, combined with the uncertainty surrounding the global economy and economic policies, increase the likelihood of sharp price corrections, such as the brief episode witnessed in global financial markets in August (see Section 1.2.1 and Chart 1.2.a). Should these corrections prove more persistent in the future, the tightening of financial conditions could act as a brake on economic activity. The financial markets of emerging countries have performed relatively well, despite the increased volatility over the summer, although they also experienced pronounced corrections during this episode.

The factors described above also pose risks to the future growth of the Spanish economy, which in addition is threatened by certain domestic factors. These notably include a slower recovery in household consumption and business investment, whose performance

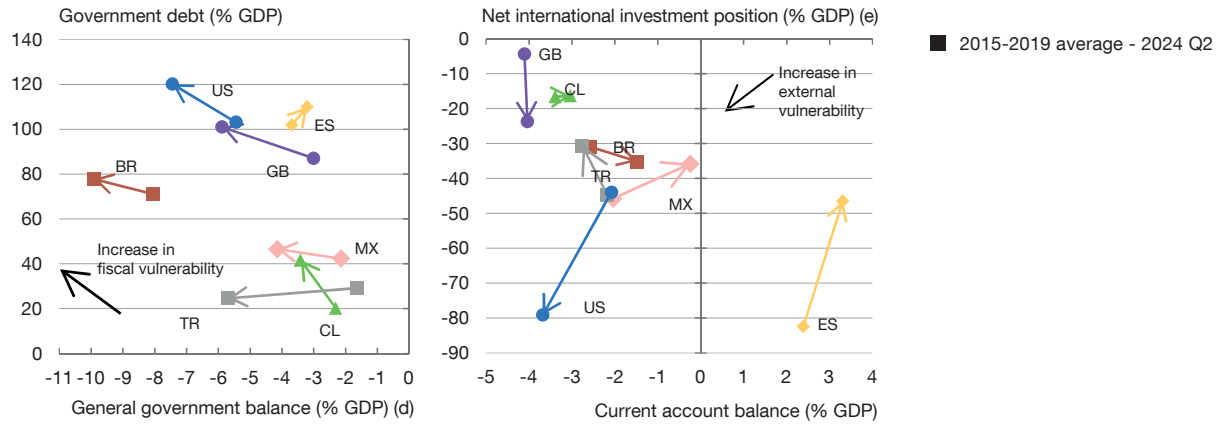
Chart 1.2

The episode of market volatility in August was reflected in large, albeit transitory, falls in stock markets in both advanced and emerging economies, in a context of mixed developments in financial vulnerabilities

1.2.a Global stock markets



1.2.b Vulnerability indicators (c)



SOURCES: Refinitiv and national statistics.

a Start of the August turbulence episode.
b MSCI Emerging Markets Index in local currency.
c The pairs of values for each variable are the average for the period 2015-2019 and the latest data available (2024 Q1).
d General government surplus (+) or deficit (-) as a percentage of GDP.
e External assets less external liabilities (stocks) as a percentage of GDP.

in the coming quarters will depend on developments in some of their key determinants. These include agents' confidence, financing conditions and the uncertainty surrounding economic policies, particularly fiscal policy, given the effects related to the make-up of a medium-term fiscal consolidation plan consistent with the new European fiscal rules, and the extent to which the plan is implemented. Similarly, the sectoral composition of growth (with low-productivity sectors, such as tourism, accounting for a large share) also poses further risks to its sustainability.

As regards the emerging economies that are material for the Spanish banking system, the main risks to financial stability would stem from a more adverse external environment or a heightening of their own vulnerabilities. US monetary policy decisions are a major determinant of financing conditions in these economies. First, a more restrictive policy than

expected could lead to capital outflows and tensions in foreign exchange markets.[2] Second, lower than expected growth in China would affect these countries through trade channels and lower commodity prices.[3] Lastly, on the domestic side, the main risks relate to the potential downward stickiness of inflation (which could hinder the monetary easing process), the mounting fiscal vulnerabilities in some countries such as Mexico and Brazil (see Chart 1.2.b), and the course of economic policy in Mexico following the formation of the new government. In Türkiye, the gradual correction of macro-financial imbalances continued, leading the rating agencies to upgrade their credit ratings.

1.2 Financial markets and the real estate sector

1.2.1 Financial markets

The interbank market

In recent months, euro area interbank market rates have decreased amid expectations of deeper policy rate cuts. A more favourable inflation outlook and the downward surprises in some macroeconomic indicators have prompted markets to revise their expectations. They now anticipate somewhat faster and steeper policy rate cuts in the euro area than a few months earlier. All this has led to declines in the interbank market rates that serve as benchmarks for bank loan agreements. Since the cut-off date for the last FSR, the 12-month EURIBOR has dropped by 108 basis points (bp), to stand at 2.6% at end-October (see Chart 1.3.a).[4]

Sovereign debt

Long-term yields on higher-rated sovereign debt have also declined in the euro area and in the United States. In the euro area, these developments in the period as a whole seem to have been largely influenced by expectations for a more accommodative monetary policy in the United States and the domestic macroeconomic weakness. At the cut-off date for this report, 10-year sovereign bond yields stood at 2.3% in Germany and 4.3% in the United States, following declines of 11 bp and 12 bp, respectively, since the cut-off date for the last FSR. Meanwhile, yields on Japanese and UK bonds increased slightly, by around 20 bp.

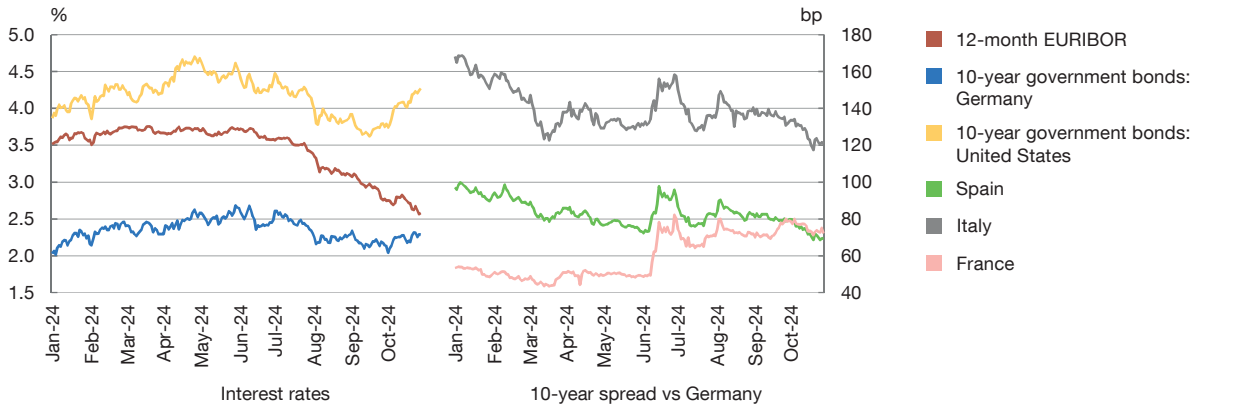
In most major euro area economies, sovereign bond spreads are somewhat narrower than they were in early April, except in France where they have widened. In early June, political uncertainty in France prompted the sovereign spread against the German Bund to

2 See page 18 of the *Report on the Latin American economy, First half of 2024,* Banco de España.
3 See page 19 of the *Report on the Latin American economy, First half of 2024,* Banco de España.
4 The data cut-off date for this report is 28 October 2024. The cut-off date for the last FSR was 5 April 2024.

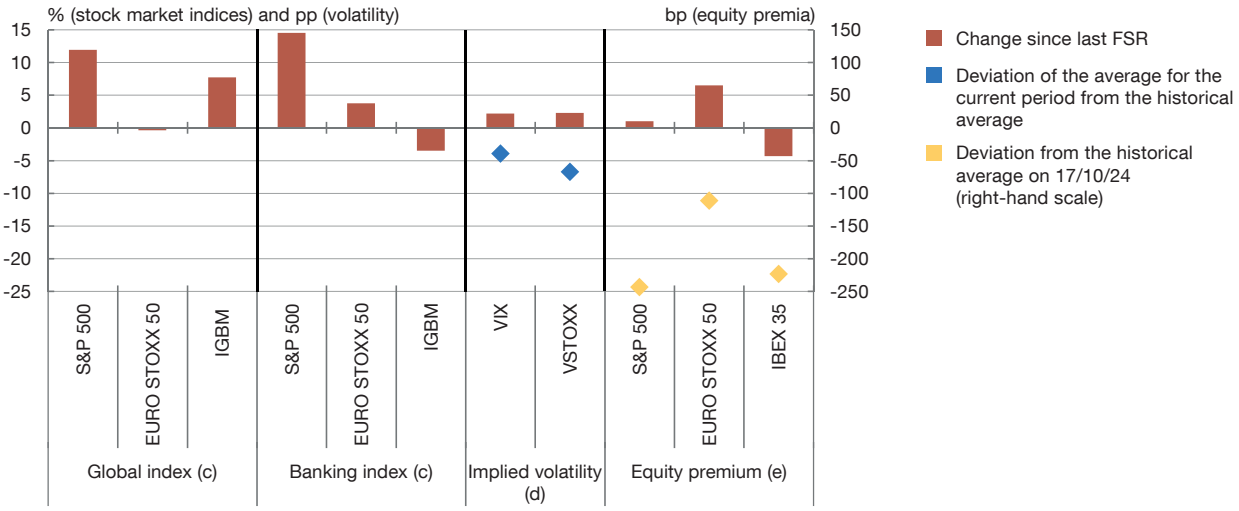
Chart 1.3

Declining sovereign debt yields in most euro area countries and in the United States and uneven equity market developments, against a backdrop of low equity risk premia

1.3.a EURIBOR, bond yields and sovereign spreads



1.3.b Stock market indices, volatility and equity risk premia (a) (b)



SOURCES: Banco de España and Refinitiv Datastream.

a The cut-off date for the last FSR was 05/04/24. The data cut-off date for this report is 28/10/24.
b The change in the equity risk premium is shown on the right-hand scale and uses weekly data.
c IGBM: Madrid Stock Exchange General Index.
d Difference between the average volatility for the period analysed in the previous FSR (24/10/23-05/04/24) and that of this report (06/04/24-28/10/24). The historical average, for the period 1999-2024, is 20.07% for the VIX and 23.41% for the VSTOXX.
e The equity risk premium is calculated based on a two-stage dividend discount model (Russel J. Fuller and Chi-Cheng Hsia. (1984). "A Simplified Common Stock Valuation Model". Financial Analysts Journal, 40(5), pp. 49-56). The historical average, for the period 2006-2024, is 500 bp for the S&P 500, 653 bp for EURO STOXX 50 and 774 bp for the IBEX 35.

expand. Despite a partial reversal in the following months, the spread subsequently widened again amid uncertainty over domestic fiscal developments.[5] At the cut-off date for this report, the 10-year spread stood at 72 bp, 21 bp wider than at the beginning of April. In Spain, the 10-year yield spread against the German Bund stands at 70 bp, down by 14 bp on early April.

5 In late May, S&P downgraded France's sovereign debt rating from AA to AA-. On 11 October, Fitch maintained its AA- rating for French sovereign debt but lowered the outlook from "stable" to "negative". Meanwhile, on 25 October Moody's reiterated its Aa2 rating for France and lowered its outlook from "stable" to "negative".

Exchange rates and equities

On the foreign exchange markets, the euro exchange rate against the US dollar stood at similar levels to those seen in April, having experienced significant appreciation and depreciation movements over recent months. The euro had appreciated against the dollar through to end-September amid expectations for a more accommodative US monetary policy stance. This movement completely reversed in October, influenced by the euro area's economic weakness and expectations for less monetary policy easing in the United States on the back of more favourable macroeconomic news. Meanwhile, the yen has depreciated over the period as a whole, reversing the appreciation witnessed in the summer, which was driven by the sharp narrowing of interest rate differentials between Japan and the other main advanced economies.

The main stock market indices have experienced episodes of pronounced corrections and volatility. This indicates that prices of risk-bearing assets are particularly sensitive to macroeconomic data, more so than in the past. Early August saw a spike in financial tensions, partly due to an overly pessimistic reading of US employment data. The initial corrections in asset prices were exacerbated by technical factors, such as the unwinding of yen carry trades[6] and the low trading volumes typical of August.

Equity markets have performed unevenly across regions. Since the April cut-off date for the last FSR, the S&P 500 Index has gained 11.9% (see Chart 1.3.b), fuelled by positive corporate earnings surprises. The Madrid Stock Exchange General Index has risen by 7.7%, while the EURO STOXX 50 remains close to its early April levels. Meanwhile, the Chinese stock market index recorded gains, buoyed by the robust economic stimulus measures in the country, while Japan's Nikkei 225 index posted a slight decline. By sector, defensive stocks[7] performed somewhat better in the euro area, while in the United States the gains were more broad-based, driven primarily by technology firms. The banking sector experienced spells of instability, with an uneven recovery across the regions.

Stock market valuation indicators and corporate spreads continue to point to high prices of risk-bearing assets. Despite the uncertain environment and downside risks to economic activity, volatility in financial asset prices has remained subdued since the last FSR. Meantime, while corporate spreads in the high-yield segment have narrowed slightly compared with early April, those in the investment grade segment have widened a little. By historical standards, these spreads are very narrow in the high-yield segment, standing close to the 25th percentile of their distribution in both the euro area and the United States (see Chart 1.4.a). Similarly, equity risk premia in the euro area, Spain and the United States are well below the

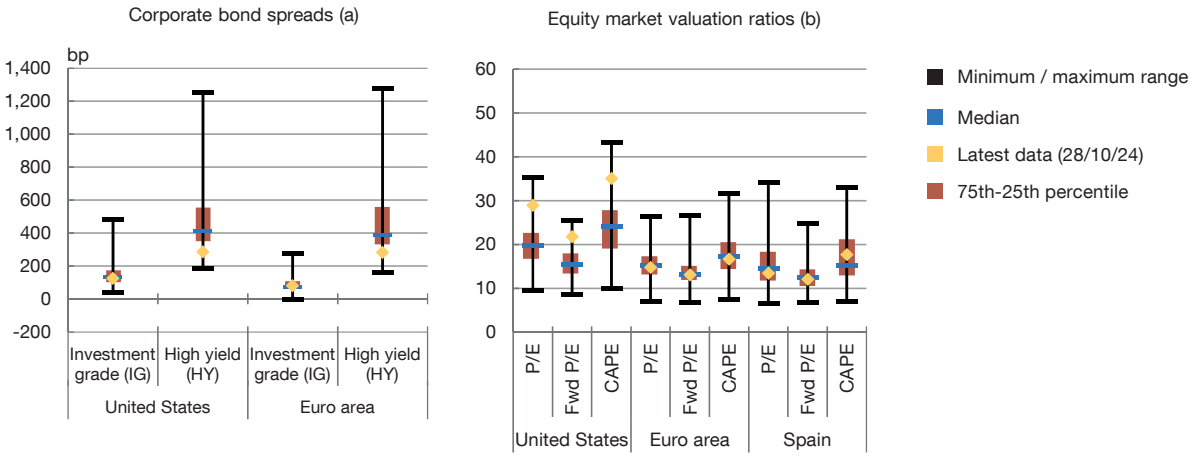
6 In a carry trade strategy, investors borrow in a currency with low interest rates to invest in assets denominated in other currencies with higher interest rates. In early August, investors who had borrowed in yen unwound some of their carry trade positions in response to the narrowing of the interest rate differential between the United States and Japan.

7 In the stock market, defensive sectors are those whose performance is less correlated with the business cycle, since their goods and services enjoy more stable demand irrespective of economic conditions.

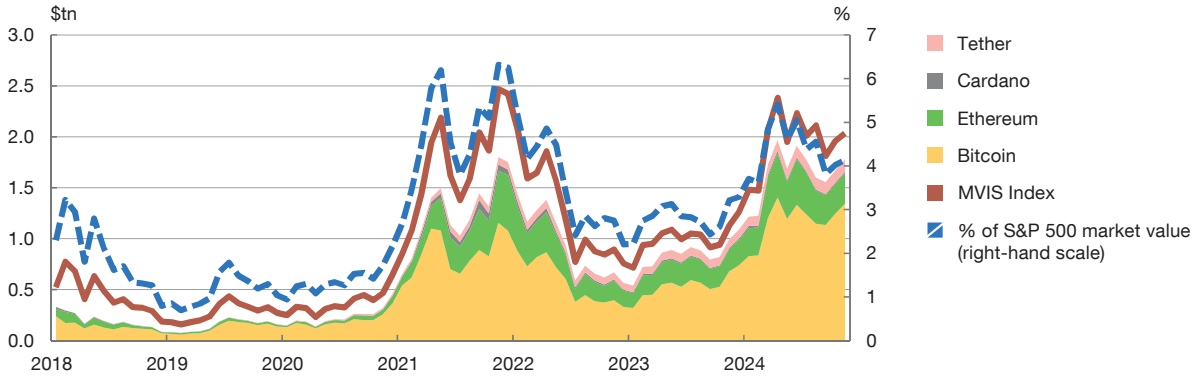
Chart 1.4

High valuations persist in some segments of the fixed-income and equity markets, while the value of crypto-assets exhibits a level similar to April

1.4.a Corporate bond and equity market metrics



1.4 b Market value of the largest crypto-assets (c)



SOURCES: Refinitiv Datastream, MVIS, CoinMarketCap and Banco de España.

a Corporate spreads over the swap curve of the ICE Bank of America Merrill Lynch indices. Monthly series data since 1998.
b Drawing on monthly data from the stock market index series constructed by Datastream (since 1985 for the euro area and the United States and since 1987 for Spain). The sample is somewhat smaller for Spain's CAPE ratio and the euro area Fwd P/E ratio. Ratios provided by Datastream, except for the CAPE (cyclically adjusted price-to-earnings) ratio which is calculated as the value of the stock market index in real terms (adjusted for CPI) divided by a 10-year moving average of the index firms' earnings in real terms. The price-to-earnings (P/E) ratio and 1-year forward P/E (Fwd P/E) ratio capture the relationship between the stock price and earnings per share (observed or expected).
c The MVIS CryptoCompare Digital Assets 100 Index, which includes the largest 100 crypto-assets by market value. All of the cryptocurrencies shown are unbacked, except Tether.

historical average (see Chart 1.3.b). The price-to-earnings ratio remains above the 75th percentile of the historical distribution in the US market, but stands closer to the median in the euro area and Spain.

In the United States, the technology sectors have been key drivers of stock market valuation metrics. That said, they have not reached the heights observed in the early 2000s

(see Box 1.2). In any event, there is considerable uncertainty over the strong earnings projected for technology companies, whose investments take a long time to become profitable. Moreover, in the United States, the market capitalisation of the leading technology firms means they comprise a very large share of broad stock market indices,[8] which increases the likelihood of individual firms' idiosyncratic risks having a systemic impact.

High prices of risk-bearing assets and compressed risk premia raise the likelihood of abrupt corrections. The current market valuations are consistent with a benign macroeconomic scenario and a very strong corporate earnings performance. Against this backdrop, adverse macroeconomic events or a significant downward revision of projected earnings for key technology firms could trigger price corrections in risk-bearing assets.

Crypto-assets continue to pose limited risks to financial stability. The capitalisation of the MVIS index, which includes the top 100 crypto-assets, stands close to its April levels and continues to represent a small fraction of financial markets (see Chart 1.4.b). That said, a return to the rapid growth of the past, which looser monetary conditions might encourage, would raise crypto-assets' contribution to systemic risk, particularly in the case of those not backed by traditional financial assets.

Some factors could exacerbate financial asset price fluctuations in response to adverse events. In particular, in the event of liquidity tensions, some financial intermediaries, such as open-ended international investment funds with illiquid or highly leveraged positions, might engage in fire sales. Moreover, stress episodes could potentially be amplified by the rapid spread of information via the internet.

1.2.2 The Spanish real estate market

The pace of growth of house prices continued to accelerate in 2024 H1, against a backdrop of high demand, supply rigidities and a growing share of properties being used for holiday lets. By segment, both second-hand and new housing saw price rises (see Chart 1.5.a) across all regions. Specifically, during the first half of the year, prices rose on average by 6.5% year-on-year for second-hand housing and by 10.7% year-on-year for new housing, in both cases well ahead of inflation. In consequence, on average, house prices exceeded their previous peak (of 2007 Q3), although in real terms they are still 25% below that level.[9] Momentum is also strong in the rental segment. The main house price drivers continue to include strong net household formation, high levels of purchases by non-

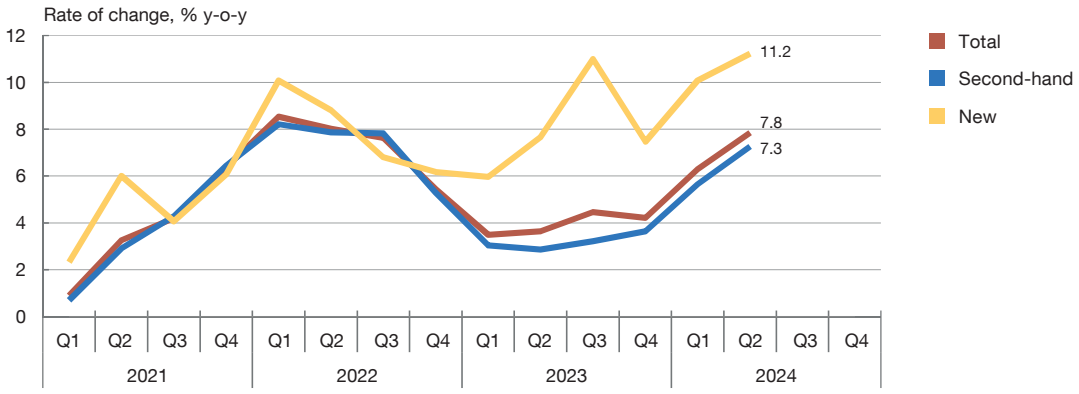
8 At end-October 2024, the capitalisation of the top technology stocks (Alphabet, Amazon, Apple, Meta, Microsoft, Nvidia and Tesla) accounted for 33% of the S&P 500. See Box 1.2 of this report for more details.

9 In 2024 Q2 house prices were 4.2% above this level: the price of new housing was 33.8% above its 2008 Q3 peak, while the price of second-hand housing was 8.9% below its peak. In real terms, house prices are below their all-time highs on all measures: total house prices are around 25% lower, new housing prices 1% lower and second-hand housing prices 35% lower.

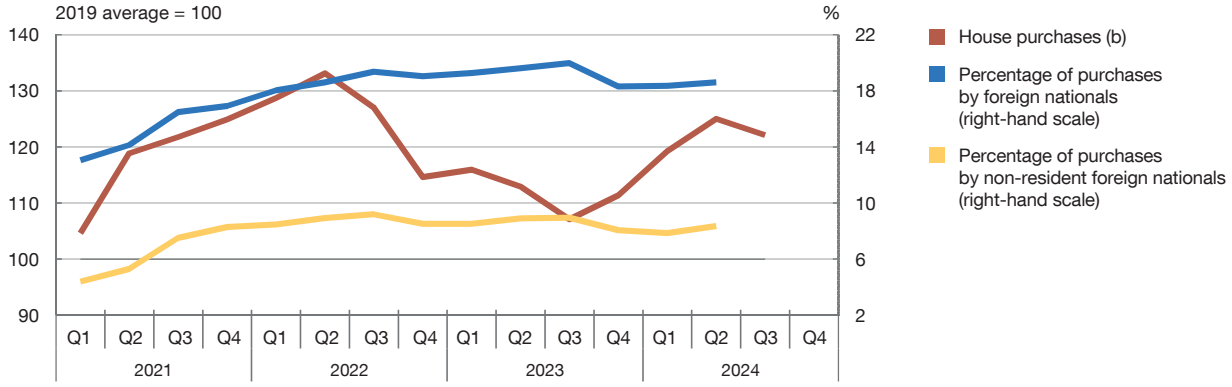
Chart 1.5

The pace of growth of house prices continued to accelerate, against a backdrop of strong demand and rigid supply in the short term

1.5.a House prices (a)



1.5.b House purchases and share of purchases by foreign nationals



SOURCES: Banco de España, Centro de Información Estadística del Notariado, INE and Ministerio de Transportes y Movilidad Sostenible.

a The chart depicts the year-on-year rate of change of house prices in each segment in 2024 Q2.
b Seasonally adjusted series. The 2024 Q3 figure is the average for the months of July and August.

residents, the growing use of rented housing for holiday lets, the sharp past increases in housing construction costs[10] and rigid supply in the short term.[11]

House purchases increased in 2024 H1, although the pace of growth subsequently decelerated over the course of Q3. Purchases signed before notary between January and August were 8% higher than in the same period a year earlier. This is the second largest

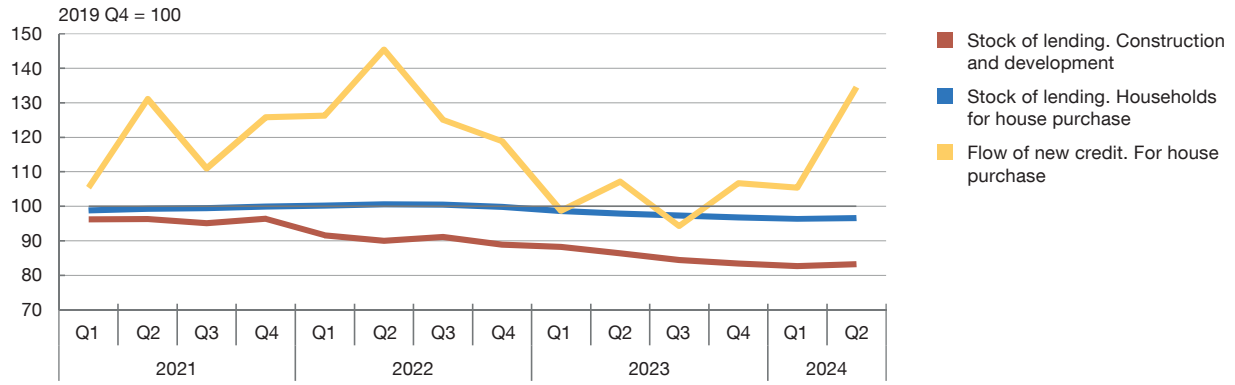
10 Changes in housing construction costs typically feed through to new housing prices with a lag of around two years, which is the average time required to complete construction. Housing construction costs surged between early 2022 and mid-2023, with year-on-year growth oscillating between 7% and 11%. They have since decelerated markedly, to year-on-year growth of just over 2% in 2024 Q2.

11 New residential building permits rose by 15% year-on-year between January and July, although the absolute number is small (119,000 in the last 12 months) compared with the housing demand linked to net household formation (272,000 on average in 2022 and 2023 and 153,000 according to the average year-on-year change in 2024 H1). Other house price drivers are associated with the growth in rental demand, especially in the big cities and tourist areas. For more details, see Dmitry Khametshin, David López Rodríguez and Luis Pérez García. (2024). "El mercado del alquiler de vivienda residencial en España: evolución reciente, determinantes e indicadores de esfuerzo". Documentos Ocasionales, 2432, Banco de España.

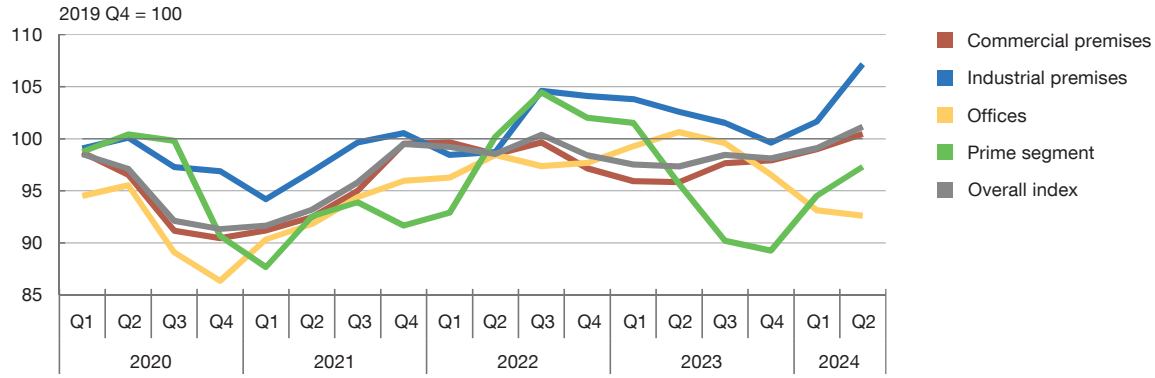
Chart 1.6

New mortgage lending rose sharply in 2024 Q2, while the stock of mortgage lending and lending for construction and real estate development was less contractionary

1.6.a Indicators of real estate sector financing (a)



1.6.b Commercial real estate sector price indices (b)



SOURCES: Colegio de Registradores and Banco de España.

a Lending for construction and development includes real estate activities. The flow of new credit refers to new lending originated in each quarter.
b Based on estimates using a hedonic regression model for each stratum. The aggregate index is the average weighted by the relative share of transactions made in each segment (4% for offices, 78% for commercial premises and 18% for industrial premises). In 2023 properties in prime locations, i.e. those located in central areas of the main large cities (Barcelona, Bilbao, Madrid, Malaga, Palma and Valencia), accounted for 4% of all commercial real estate transactions.

increase for this 8-month period since 2008 (the highest being recorded in 2022). In seasonally adjusted terms, albeit on incomplete information for Q3, momentum was lower than in 2024 H1 (see Chart 1.5.b). Purchases by foreign nationals remain high. In the first half of the year they accounted for 18.5% of the total, somewhat more than in 2019 H1 (17%) and at the upper end of the range of figures since records began.

The flow of new credit for house purchases rose sharply in 2024 H1 as borrowing costs declined. The volume of new credit grew by 25.6% year-on-year in 2024 Q2, after correcting in 2023 (-10.2% year-on-year in 2023 Q4). With this latest increase, the flow of new financing for house purchases has risen slightly above the levels recorded in 2021 H1 during the rebound that followed the health crisis and before the start of the monetary policy tightening cycle (see Chart 1.6.a).

Despite this growth in new credit, the high volume of repayments has meant that the stock of mortgage lending continues to shrink. However, the pace of decline in 2024 H1 was slower than in previous periods (1.4% year-on-year in 2024 Q2 compared with 3.1% in 2023 Q4) (see Chart 1.6.a).

Credit was also less contractionary in bank lending to construction and real estate development firms. In this case, the stock of lending decreased by 3.6% year-on-year at June 2024 (compared with a decline of 6.2% year-on-year at December 2023) (see Chart 1.6.a).

Commercial real estate prices recovered somewhat in 2024 H1. The overall price index rose by 3.9% year-on-year in 2024 Q2, compared with a correction of 0.3% at December 2023 (see Chart 1.6.b). This increase was driven by price rises in commercial and industrial premises, while office prices continued to fall. In the prime commercial real estate segment, prices rose moderately in Q2.

1.3 Non-financial sectors

1.3.1 Non-financial corporations and households

Non-financial corporations

Corporate profits performed favourably in 2024 H1, albeit unevenly across sectors. On the combined information of the Spanish tax authorities (AEAT) and the Central Balance Sheet Data Office Quarterly Survey (CBQ), the gross operating profit (GOP)[12] of the non-financial business sector increased in nominal terms by 6.5% year-on-year in 2024 Q1 and by 9.2% in Q2 (see Chart 1.7.a). The highest growth was in construction and real estate and in wholesale and retail trade and hospitality. By contrast, in the manufacturing sector profits fell slightly between April and June compared with the same period a year earlier.

The most recent data from the Banco de España's Business Activity Survey (EBAE), corresponding to Q3, indicate that business activity remains on a positive path. Although firms perceive a decline in turnover in Q3 – consistent with the seasonal pattern – the outlook for Q4 is positive. In addition, a smaller proportion of firms now report constraints on their activity on account of difficulties accessing financing or interest expenses. Nevertheless, concerns remain over uncertainty about economic policies, labour shortages and possible increases in energy costs.

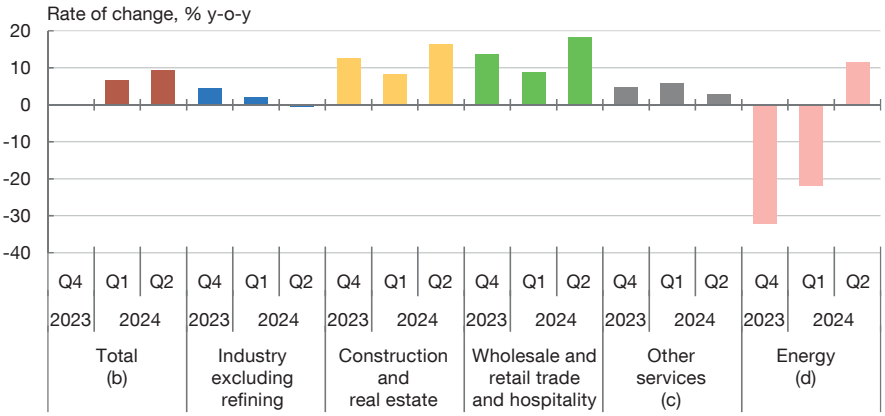
The volume of non-financial firms' debt rose in 2024 H1, interrupting the downward trend of the previous 18 months. However, assisted by GDP growth, the debt ratio continued

12 GOP is obtained by subtracting intermediate consumption (production costs and other operating expenses) and personnel costs from output (sales and other operating income).

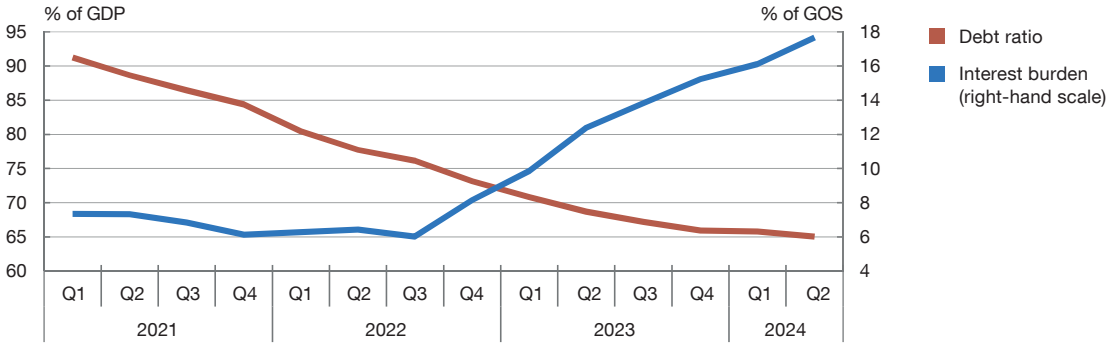
Chart 1.7

Strong corporate profits and the declining debt ratio continue to contain the risks associated with the interest burden

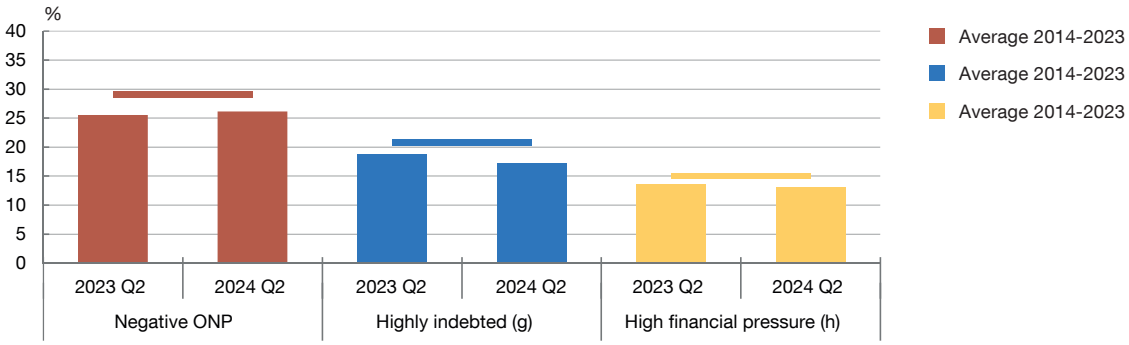
1.7.a GOP of Spanish NFCs (AEAT and CBQ) (a)



1.7.b Debt ratio and interest burden (e)



1.7.c Percentage of vulnerable firms (CBQ) (f)



SOURCES: AEAT, INE and Banco de España.

a GOP is obtained by subtracting intermediate consumption and personnel costs from output. Seasonally adjusted data.
b Excluding education, health, general government, recreation activities, financial and insurance institutions, and other services. The data source is the AEAT, except for electricity, gas, steam and air conditioning supply and manufacture of coke and refined petroleum products, for which the data source is the CBQ.
c Includes transportation and storage, information and communication, professional, scientific and technical activities, and administrative and support service activities.
d Includes energy, mining and quarrying, and electricity, gas and water supply.
e Interest payments are quarterly data, before allocation of financial intermediation services indirectly measured (FISIM). GOS is quarterly and seasonally adjusted.
f Excluding holding companies.
g Highly indebted firms are those whose net financial debt / (GOP + financial revenue) ratio is greater than 10 or which have positive net financial debt and zero or negative earnings. Positive net financial debt is defined as interest-bearing debt less cash and cash equivalents.
h Firms facing high financial pressure are proxied as those whose earnings are insufficient to cover their interest payments.

to decline (by 3.6 percentage points (pp) year-on-year), standing at 65% at June 2024 (see Chart 1.7.b), a level not seen since 2002 and 1.8 pp below the euro area average.

Non-financial firms' interest payments have continued to rise, but they could start to fall in the coming months. According to the institutional sector accounts in the National Accounts, interest payments in 2024 H1 were 13% higher than in 2023 H2. However, in the case of bank loans, interest payments have fallen slightly since May and this pattern will likely continue in the coming months if market interest rate expectations are met,[13] as short-term loans are rolled over and variable-rate loans are reset. For some firms interest payments could increase, if they roll over fixed-rate loans arranged before the last monetary policy tightening cycle, although according to Central Credit Register data, these loans account for a very small share of the total.

Overall, interest coverage ratios remain significantly above the levels observed before the last monetary tightening cycle. According to the National Accounts, the ratio of interest payments to gross operating surplus (GOS) stood at 17.7% in 2024 Q2, 5.3 pp higher than a year earlier (see Chart 1.7.b). This level is close to the historical quarterly average and median since 1999 (16% and 18%, respectively), but it is still well above the levels observed previous to the last monetary tightening cycle (around 7%).

Corporate vulnerability indicators show small variations and of different sign, although they remain, in any event, at historically low levels. According to data from the CBQ, which includes mostly medium-sized and large firms, the proportion of highly-indebted firms[14] and of firms facing high financial pressure (those whose ordinary earnings were insufficient to cover their interest payments)[15] decreased moderately in 2024 H1 (see Chart 1.7.c). By contrast, the proportion of firms whose ordinary earnings (proxied by ordinary net profit (ONP)[16]) were negative has grown slightly, by some 0.6%. In any event, vulnerability levels are below the average for the period 2014-2023. By sector, vulnerability levels have fallen most sharply in wholesale and retail trade and hospitality, while they have worsened somewhat (on all three indicators) in energy.

Households

Household income continued to grow in 2024 H1, underpinned by job creation, rising wages and property income. In the first half of the year employment grew by 2.3% and

13 The methodology used for these calculations is explained in "Box 1. Monetary policy transmission to interest payments on the bank debt of households and firms". In Banco de España, *Report on the financial situation of households and firms,* Second half of 2023, pp. 25-28.

14 Highly indebted firms are those whose net financial debt / (GOP + financial revenue) ratio is greater than 10 or which have positive net financial debt (gross financial debt less liquid assets) and zero or negative earnings. The threshold of 10 is obtained assuming that firms can refinance their debts with loans with an approximate term of 10 years, in an amount that is 10 times their long-term expected earnings, at a market interest rate, and with annual instalments equal to their annual earnings. If firms take out larger loans, they would be unable to meet the annual instalments with their earnings.

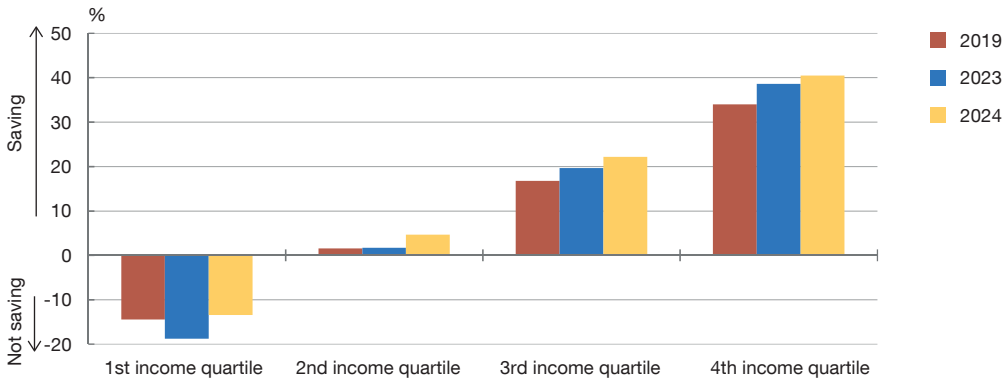
15 For the purposes of this indicator, ordinary earnings are calculated as the sum of GOP and financial revenue, excluding financial costs.

16 ONP is obtained by deducting financial costs and operating provisions and depreciation from GOP and adding financial revenue.

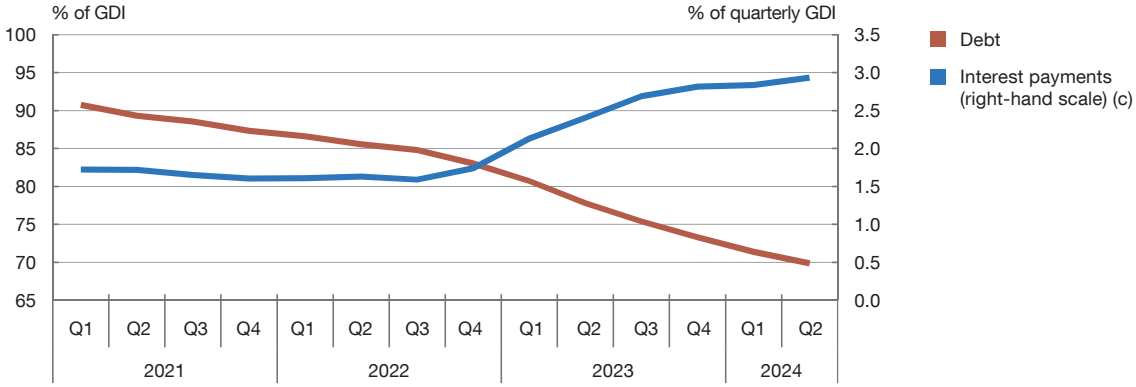
Chart 1.8

The ability to save has improved, although lower-income households are still unable to save. The debt-to-income ratio has risen slightly

1.8.a Households' ability to save, by level of income. Average January-September (a)



1.8.b Household debt and interest payments (b)



SOURCES: European Commission, INE and Banco de España.

a Households' ability to save is based on the following question: which of the following best describes your households' present financial situation? Indicator = weighted net percentage of positive replies less negative replies, i.e. percentage of households that reply "we are saving a lot" x 1 + percentage of households that reply "we are saving a little" x 1/2 - percentage of households that reply "we need to use our savings" x 1/2 - percentage of households that reply "we are getting into debt" x 1.
b Quarterly GDI, debt and interest payments are seasonally adjusted.
c Interest payments are quarterly data, before allocation of FISIM.

compensation per employee by 5.3%, in both cases in average year-on-year terms. These rates of growth were, in any event, more moderate than those seen in 2023 H2. Average real gross disposable income (GDI)[17] per household[18] rose by 3.8% year-on-year on average (compared with 4.4% in 2023 H2), and is 2.8% above its pre-pandemic level.[19]

Growing income, combined with a relative sluggishness in consumption, has led to higher savings. The saving rate rose to 13.1% of GDI in 2024 Q2, remaining above the

17 GDI includes compensation of employees, GOS and gross mixed income, property income and net taxes paid (which are deducted). Nominal GDI rose by 10%, in average year-on-year terms, in 2024 H1. Real income is calculated by adjusting nominal values using the private consumption deflator.
18 The number of households rose by 0.8% year-on-year at June 2024.
19 In seasonally adjusted terms.

historical average for the seventh consecutive quarter. The European Commission's consumer survey indicates that the increase in the ability to save has been widespread across income quartiles, albeit more marked in the higher income segments where it is most clearly above pre-pandemic levels (see Chart 1.8.a). Households in the lowest income quartile are still unable to save.

The volume of household debt rose in 2024 Q2, for the first time since summer 2022, while household gross wealth continued to increase. Income grew at a faster pace than debt levels, enabling the household debt ratio to ease – by 7.9 pp year-on-year – to 69.9% of GDI[20] in 2024 Q2, a level not seen since 2001 and 14.2 pp below the euro area average (see Chart 1.8.b). Consumer lending, while growing somewhat less robustly than nominal household consumption,[21] has continued to outpace other credit segments. Combined with the decline in the stock of mortgage lending, this has meant that, at June 2024, consumer credit amounted to nearly 15% of total household debt, almost 1 pp more than a year earlier. Gross household wealth grew by 6.5% year-on-year in 2024 Q2, driven mainly by rising house prices.

Households' debt burden has increased slightly, in terms of debt-to-income, but it could start to decline in the coming months. In 2024 H1 overall, households' interest payments were still above their 2023 H2 levels (9.8% higher), but the increase in nominal income has moderated the impact. The debt burden stood at 2.9% of GDI in 2024 Q2, 0.1 pp higher than six months earlier and 0.5 pp higher than in 2023 Q2 (see Chart 1.8.b). However, since May the average cost of households' outstanding debt has begun to ease, standing at 4.6% in August, barely 6 bp less than in April. Based on current market expectations – which point to a gradual decline in policy rates – it is estimated that, by end-2024, the cost of more than 40% of the stock of variable-rate mortgages (which in June accounted for 48.2% of the total stock of mortgages)[22] will have fallen by more than 50 bp (and the cost of almost three-quarters of those mortgages, by more than 100 bp).

1.3.2 General government in Spain

In recent months limited progress has been made in restoring Spanish public finances. The continued increase in public expenditure (5.3% year-on-year in 2024 H1) has dampened the positive impact of revenue growth (6.4% year-on-year). This will foreseeably result in failure to comply with the EU recommendation that the increase in net public expenditure[23] in Spain in 2024 be below 2.6%.

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20 The amount of households' outstanding loans is seasonally adjusted.

21 At June 2024, year-on-year growth in final household consumption at current prices stood at 6.7%, compared with 5.25% for consumer credit stock provided by deposit institutions and specialised lending institutions.

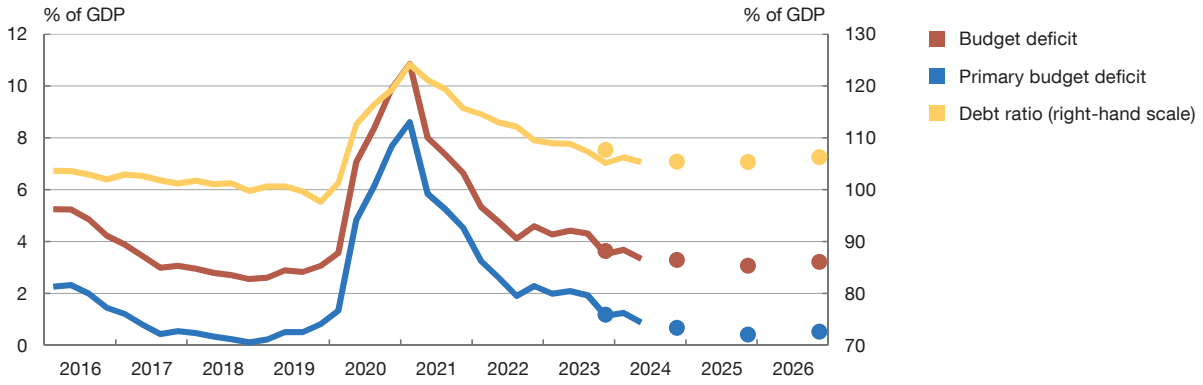
22 Also at that date, 16.4% of the stock of loans for house purchase were mixed-rate loans.

23 The recommendation is defined based on public expenditure, excluding interest payments, the cyclical component of unemployment, extraordinary expenditure and expenditure financed or co-financed with European funds. The change in revenue owing to discretionary measures applied by the authorities is subtracted from the resultant increase.

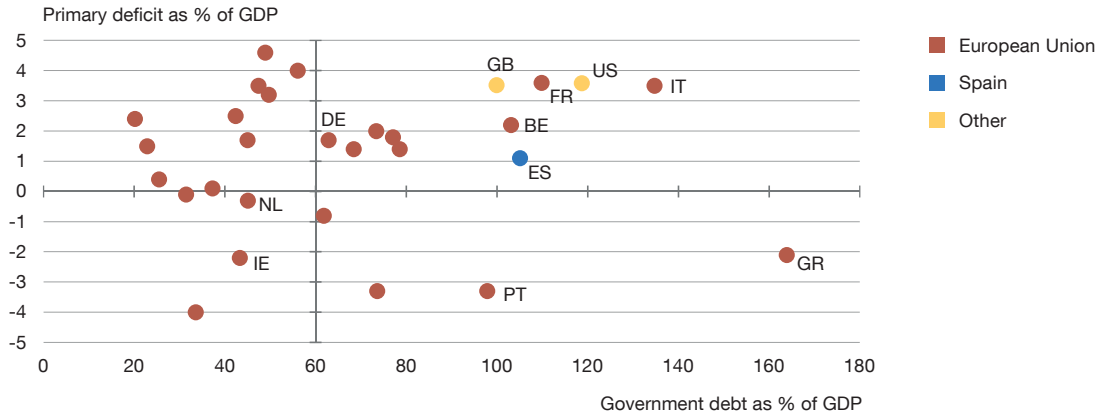
Chart 1.9

Spain's public finances are still a source of vulnerability

1.9.a General government financial position in Spain (a)



1.9.b International comparison (2023)



SOURCES: Eurostat, IMF, IGAE and Banco de España.

a The circles correspond to the Banco de España's projections published on 17 September, before the revision of the National Accounts series by the IGAE and INE. This revision altered the baseline data for 2023. The projections are made under the assumption that there are no economic policy changes, which means they do not include the Government's fiscal plan announced on 15 October.

However, improvements have been made in budget deficit and government debt levels as a percentage of GDP, underpinned by GDP growth and the upward revision of GDP growth estimates for previous years. During the first six months of the year, the budget deficit-to-GDP ratio fell by 0.2 pp, standing at 3.3% (see Chart 1.9.a). Meanwhile, the Spanish general government debt ratio stood at 105.3% of GDP at June, 3.5 pp below its June 2023 level, which in turn was revised down by 2.6 pp in the latest revision to the National Accounts.

In this setting, Spain remains in the group of developed countries with vulnerable public finances (see Chart 1.9.b). In the absence of fresh revenue and/or expenditure adjustment measures, the declines in the budget deficit and government debt ratios will tend to peter out in the coming years. This is on account of the strong structural component of the Spanish budget deficit and the impending upward pressures on expenditure linked to population

ageing, national defence and security and the energy and digital transitions. Following the pandemic-related health crisis and the energy crisis stemming from the Russian invasion of Ukraine, the Spanish economy has achieved a strong recovery that has significantly reduced the imbalance in public finances. However, the deficit remains close to its pre-pandemic levels, which means that, in structural terms, there has been little improvement since 2020. That said, the performance has been better than that of other European economies, which have seen their structural deficits increase over the same period.

Since publication of the last FSR, the average cost of new financing raised by the Spanish Treasury has fallen. The start of the policy rate-cutting cycle in the main economies, especially in the euro area, and the containment of the Spanish general government risk premium, have meant that sovereign bond yields at issue have fallen slightly. Thus, the actual cost of new financing at issue for the Spanish Treasury in 2024 Q3 was 3.08%, compared with 3.44% on average in 2023 and 3.30% in 2024 H1.

Nevertheless, the interest burden will continue to drive up public expenditure in the coming years. Markets expect to see further reductions in policy rates, but they will tend to steady at levels above those in place before the tightening cycle began. In consequence, when it comes to rolling over the debt issued when interest rates were very low (before 2022), prices will rise. Specifically, it is estimated that the average cost of outstanding general government debt will go from 2.3% in 2023 to 2.6% in 2026. The interest burden as a percentage of GDP will likewise increase from 2.5% to 2.7%. However, in a high debt environment, a more adverse (upward) performance by yields at issue would have a significant further impact on public finances.

Strict application of the new EU fiscal rules, from 2025, aims to place the government debt of the most indebted countries, such as Spain, on a clear downward path. Eventually, this would restore headroom in order for Spanish general government to address possible future shocks. It would also mean that public finances would be less sensitive to moves in market interest rates, and would thus reduce the vulnerabilities associated with the general government's financial position.

Against this backdrop, on 15 October the Government submitted its first medium-term fiscal-structural plan (MTFSP), which proposes a linear structural adjustment of 0.4 pp of GDP per year, over seven years. This plan must be validated by the European Commission during November. The proposed adjustment is similar to – albeit somewhat lower than – that deemed necessary by the Banco de España (0.5 pp) and would place Spanish government debt on a clearly downward path. However, the plan's timeline envisages stricter limits on net expenditure growth in the later stages, meaning that it will be easier to meet in the early years than in the subsequent ones. In consequence, the plan fails to take advantage of the current favourable economic situation to bring forward the fiscal effort in a countercyclical manner.

1.3.3 Financial flows vis-à-vis the rest of the world and the international investment position

During 2024 H1, the negative net international investment position (IIP)[24] continued to decline as a percentage of GDP. Specifically, it stood at 46.9% at June, 7.6 pp lower than a year earlier. This contraction was once again underpinned by the large current and capital account surplus[25] and by nominal GDP growth, combined with the net positive impact of changes in the value of financial instruments. The decline in Spain's gross external debt as a percentage of GDP was lower in the first half of the year. This was due to the increase in the outstanding amount of external debt (€59.5 billion), mainly as a result of the growth in non-residents' holdings of general government securities (€41.8 billion). By contrast, the external debt of the banking sector[26] has decreased slightly. The growth in nominal GDP led to a small decline in the external debt-to-GDP ratio, which stood at 162.6% in mid-2024.

24 The negative net IIP is defined as the negative difference between Spain's external financial assets and its external financial liabilities.

25 The current and capital account balance reflect the net lending (+) or net borrowing (–) of the economy vis-à-vis the rest of the world. A large surplus is associated with high net lending.

26 The gross external debt includes liabilities issued by the banking sector held by the rest of the world, excluding equity instruments and financial derivatives.

Box 1.1

GEOPOLITICAL RISKS TO INTERNATIONAL TRADE FLOWS

The multilateralism that has shaped international relations in recent decades is being increasingly undermined by geopolitical issues.[1] Ongoing conflicts in Ukraine and the Middle East and trade tensions between the United States and China are affecting international trade and investment patterns and having economic consequences that are still difficult to fully gauge.

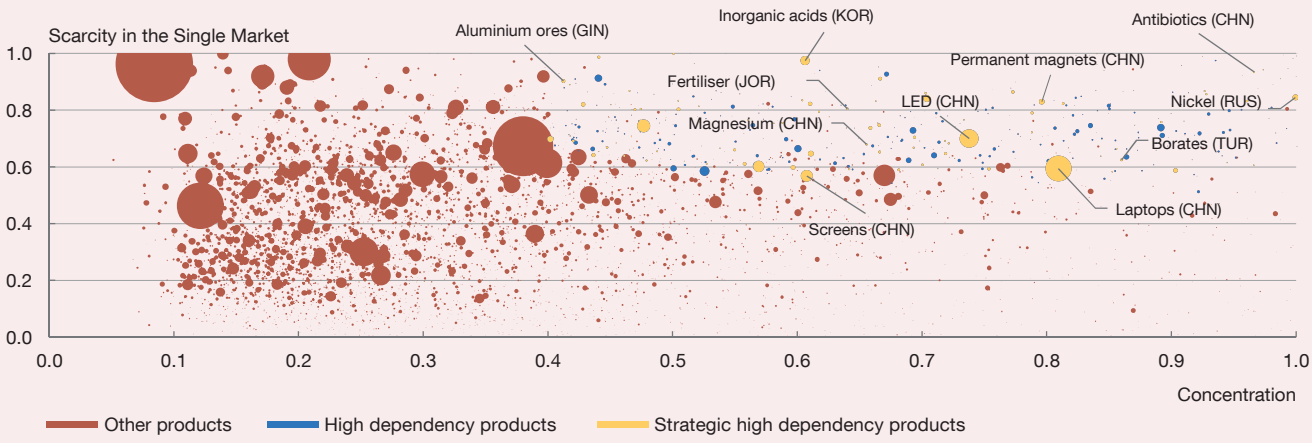
Spain and the European Union (EU) face this new environment with highly open economies that are integrated into global trade and investment flows. The high degree of external openness has been one of the main drivers of European economic growth in recent decades. However, a high concentration of imports in a few non-EU suppliers (that may ultimately exercise a dominant position in the supply of certain products) could prove to be a source of vulnerability to external shocks, especially in the case of products that are difficult to substitute.

Moreover, supply risks are amplified by geopolitical tensions if these escalate to confrontations that entail sanctions and trade restrictions. A recent example is the episode following Russia's invasion of Ukraine and the problems created by some EU Member States' significant dependence on natural gas imported from Russia.[2]

The external dependency of the EU and Spain

To identify the European economy's vulnerabilities to the potential materialisation of geopolitical shocks, Chart 1 applies the methodology developed by the European Commission,[3] using granular bilateral trade flow data. This methodology classifies a product as a high dependency product for the EU if it meets the following conditions: (i) its extra-EU sources of imports are highly concentrated, (ii) it is scarce on the Single Market, and (iii) European exports of the product would

Chart 1
The EU's trade dependencies (2022) (a)



SOURCE: Banco de España, drawing on the CEPII BACI database.

a The trade dependencies of the EU were identified using the methodology in Arjona, Connell and Herghelegiu (2023), based on 6-digit (HS6) level bilateral trade flow data. The horizontal axis shows the concentration indicator, while the vertical axis represents the scarcity of a product in the Single Market. The size of the circle denotes the total value of extra-EU imports for each product. The blue circles are high dependency products. The yellow circles are high dependency products that the European Commission deems "strategic". See footnote 4 for definitions. The main supplier of some products is shown in parentheses. Data from 2022.

1 Demosthenes Ioannou and Javier J. Pérez (coordinators) (2023). "The EU's Open Strategic Autonomy from a central bank perspective. Challenges to the monetary policy landscape from a changing geopolitical environment", ECB Occasional Paper 311.

2 Javier Quintana (2022). "Economic consequences of a hypothetical suspension of Russia-EU trade", *Economic Bulletin – Banco de España,* 2/2022, Analytical Article, and Lucía López, Susana Párraga and Daniel Santabárbara (2022), "The pass-through of higher natural gas prices to inflation in the euro area and Spain", *Economic Bulletin - Banco de España,* 3/2022

3 See Ramón Arjona, Wiliam Connell and Cristina Herghelegiu (2023), "An enhanced methodology to monitor the EU's strategic dependencies and vulnerabilities", Single Market Economics Papers, WP2023/14.

not be sufficient to substitute an abrupt curtailment in trade flows.[4]

Of the 5,400 imported goods analysed,[5] 413 qualify as dependent products (459 in the case of Spain).[6] The European Commission classifies certain dependent products as "strategic", given their importance to defence, health or the green and digital transitions.[7]

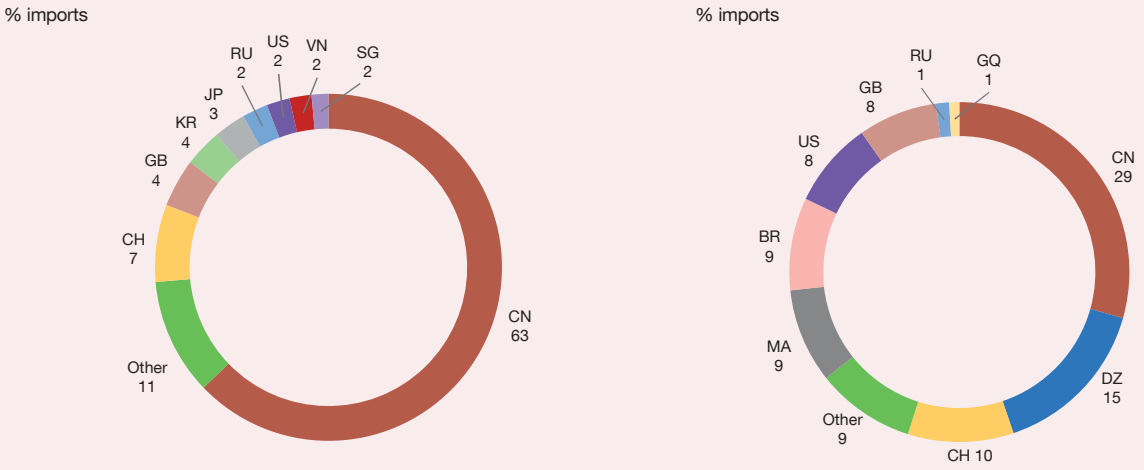
For the EU as a whole, China is the main source of 40% of these categories of strategic high dependency products, supplying 63% of the value of all European imports (see Chart 2, left-hand panel). With regard to Spain's extra-EU imports, China is also the main supplier of 37% of this category of goods accounting for 29% of the total value of such imports (see Chart 2, right-hand panel).

Strategic high dependency products include high technology content products, such as portable electronic devices, screens, semiconductors and permanent magnets, as well as raw materials considered critical or strategic owing to their economic importance and sourcing difficulty, such as aluminium, borate and magnesium. It should be noted that 70% of the EU's imports, and more than 45% of Spain's extra-EU imports, come from countries that tend to take a different stance to the EU on geopolitical issues,[8] which may magnify imports' vulnerability to such shocks (see Chart 3).[9]

EU energy imports and the green transition

Energy products are a unique example of dependency. As shown by the Russian invasion of Ukraine in 2022,

Chart 2
Strategic high dependency products in the EU (l-h panel) and Spain (r-h panel) (2022) (a)



SOURCE: Banco de España, drawing on the CEPII BACI database.

a Percentage of extra-EU imports of strategic high dependency products from each trading partner.

4 Import concentration is measured using the Herfindahl-Hirschman Index, scarcity on the Single Market is calculated using the ratio of extra-EU imports to total imports, and the substitutability of imports with exports is measured using the ratio of extra-EU imports to total EU exports. Products are also ordered based on their average ranking by the three indicators. A product is deemed a high dependency product if it exceeds the pre-defined thresholds for the three indicators and is in the top 10% of products in terms of aggregated rank.

5 Chart 1 uses the 6-digit level Harmonized System (HS6) data on values of bilateral trade flows from the CEPII BACI database. See Guillaume Gaulier and Soledad Zignago (2010), "BACI: International Trade Database at the Product-Level. The 1994-2007 Version", CEPII Working Paper, 2010-23.

6 Given the focus on trade dependencies and vulnerabilities, the analysis for Spain only considers extra-EU imports, since intra-EU imports are deemed to be subject to less risk of supply disruptions.

7 See footnote 3.

8 Based on the distribution's quartiles of the geopolitical distance index by Michael A. Bailey, Anton Strezhnev and Erik Voeten (2017), "Estimating Dynamic State Preferences from United Nations Voting Data", *The Journal of Conflict Resolution,* 61(2), pp. 430-456, constructed using countries' voting data on United Nations resolutions on human rights. This indicator is often used in the literature as a proxy for the "geopolitical distance" between countries.

9 The difference between these two figures is attributable to the fact that Brazil and Morocco account for a larger relative share of Spain's imports, as do the United States and the United Kingdom, which are relatively close countries geopolitically speaking.

energy product supply constraints can cause sharp price increases, with significant implications for the competitiveness of European firms.[10]

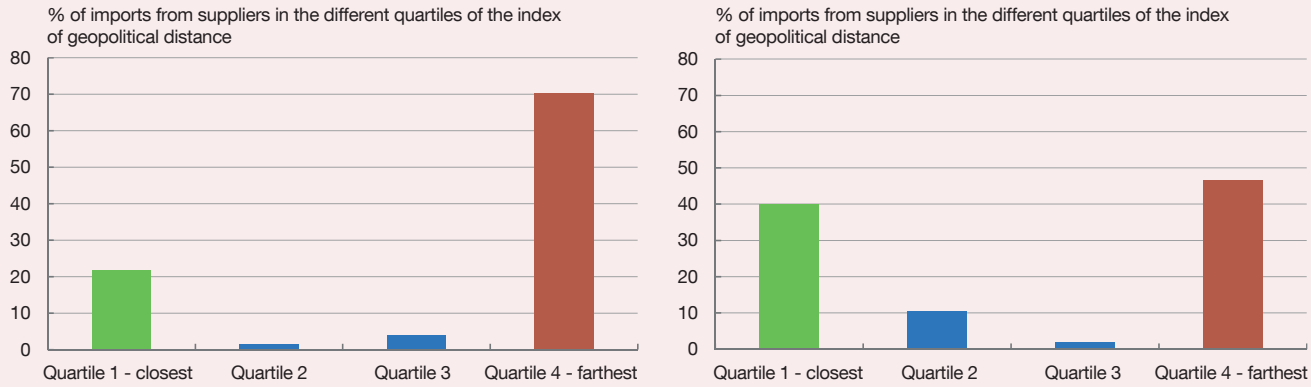
In 2022, 63% of available energy in the EU depended on net imports of energy products, in particular oil and oil products and natural gas.[11] In addition, the four main imported energy products – crude oil, liquefied and gaseous natural gas (LNG and GNG) and hard coal – are relatively scarce in the Single Market and difficult to substitute.[12] Supply, however, is not particularly concentrated. For example, the EU imported crude oil from 35 trading partners in 2022. The largest supplier that year – Russia – is geopolitically very distant from the EU and accounted for 19% of total imports. Of these 35 oil-supplying countries, 15 (representing 41% of imports) could be classified as either geopolitically close to the EU or neutral.

Among Spain's extra-EU imports of energy products, there is a notable concentration in the GNG supply (almost all of which comes from Algeria) and liquid petroleum gas (60% of which comes from the United States and more than 35% from Algeria).

It should also be noted that more recent Eurostat data for selected products[13] show that the sanctions imposed by the European Commission on Russia in late 2022 and early 2023 altered the patterns of the EU's energy dependency on this supplier country. In 2024 Q2, Russia no longer ranked as the top exporter of GNG (having been replaced by Norway and Algeria), crude oil[14] (replaced by the United States and Norway) or coal (replaced by Australia and the United States). As a result, the EU's imports of energy products have been reoriented towards geopolitically closer suppliers (see Charts 4, 5 and 6, left-hand panels).

However, this is not the case in Spain. Between 2022 and 2024 Q2, Russia's share of Spain's extra-EU LNG imports rose from 18% to 36% and Algeria's from 1% to 20%, while the US share dropped from 40% to 20%.

Chart 3
Geopolitical distance of the main suppliers of strategic high dependency products to the EU (l-h panel) and Spain (r-h panel) (a)



SOURCES: Banco de España, drawing on the CEPII BACI database, and Bailey, Strezhnev and Voeten (2017).

a Percentage of extra-EU imports of strategic high dependency products from suppliers in different quartiles of the geopolitical distance index of Bailey, Strezhnev and Voeten (2017). See footnote 8 for a definition of the index. A low (high) value denotes a low (high) geopolitical distance between the exporter of a product and the EU/Spain. The data in the geopolitical distance index refer to the average of the period 2018-2022.

10 "Spain and the European Union in the face of the energy crisis: near-term adjustments and challenges pending", Chapter 4 of the Annual Report 2022, Banco de España (2023).

11 According to Eurostat data. Nuclear energy, renewable energy and biofuels are considered domestically produced energy.

12 Given the issues of under-reporting that affect cross-border trade flows of energy products (Cecilia Bellora, Pierre Cotterlaz and Malte Thie (2022), "Trade datasets are not the right starting point to discuss trade in natural gas", CEPII blog), this analysis uses the Eurostat NRG database, which reconstructs trade flow data with data provided by ministries and national agencies specialising in energy.

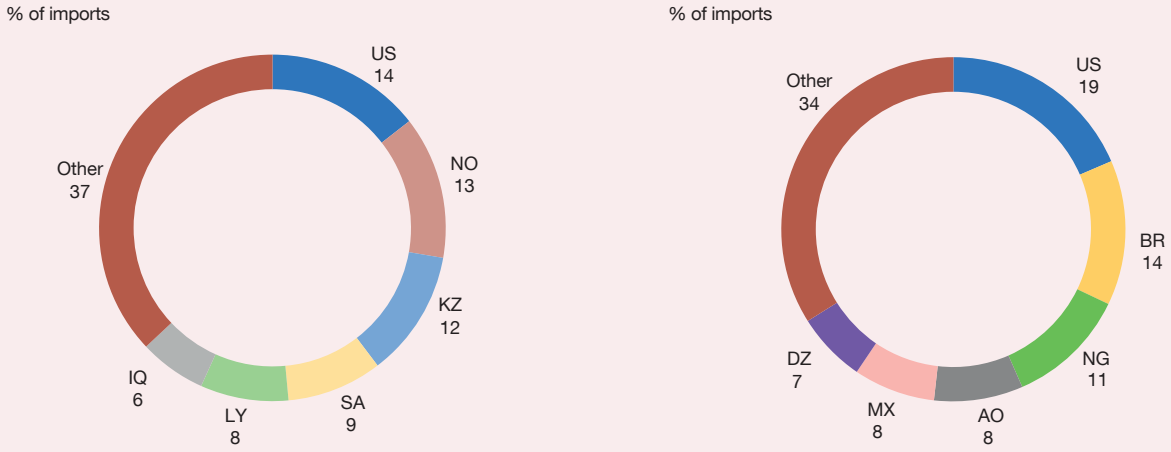
13 The data available relate to selected suppliers and do not allow the calculation of concentration, scarcity and substitutability indices.

14 The products considered in the European Commission's statistics refer to oils obtained by condensing natural gas, crude oil and oils obtained from bituminous minerals.

Turning to extra-EU imports of GNG and LNG, Russia rose from the fourth largest supplier in 2022 to the second in the first eight months of 2024, only behind Algeria. It should be noted that the EU's imports of LNG from Russia also rose in 2024, with the share of this supplier climbing from 14% in 2022 to 17% in 2024 Q2. In any case, this increase in Russia's share of natural gas imports is partly attributable to greater demand for LNG and the availability of unused capacity at regasification plants in some countries, including Spain, which enable operations to respond flexibly to supply and demand.

The significant dependence on external energy is one of the factors behind forecasts that energy prices in the EU will, in the medium term, remain above those of other global players, such as the United States.[15] Looking ahead, this energy dependency is expected to be lessened

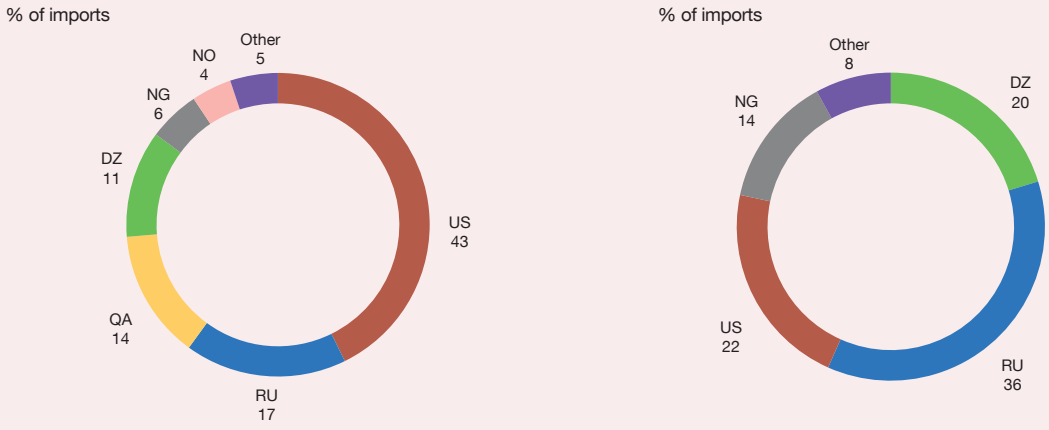
Chart 4
Main suppliers of crude petroleum oils to the EU (l-h panel) and Spain (r-h panel) (2024 Q2) (a)



SOURCE: Banco de España, drawing on estimates from Eurostat (for the EU) and Eurostat-Comext (for Spain).

a Share of crude petroleum oils imported to the EU and Spain from different non-EU suppliers in 2024 Q2. "Other" includes producers such as Nigeria, Brazil, the United Kingdom and Russia, in the case of the EU, and exporters such as Libya, Saudi Arabia and Norway, in the case of Spain.

Chart 5
Main LNG suppliers to the EU (l-h panel) and Spain (r-h panel) (2024 Q2) (a)



SOURCES: Banco de España, drawing on estimates from Eurostat (for the EU) and Cores (for Spain).

a Share of LNG imported to the EU and Spain from different non-EU suppliers in 2024 Q2.

15 International Energy Agency (2023), "Electricity Market Report Update Outlook for 2023 and 2024", and International Energy Agency (2023) "Medium-Term Gas Report 2023".

by the green transition, as the shift from fossil fuels to clean energy could lead to a lower weight of imports in European energy consumption. In recent decades, European companies have spearheaded development of the technologies needed for this transition, accounting for almost a third of patents worldwide related to green energy sources. However, in some key sectors, such as solar energy, China currently controls most of the market at several stages of the production chain.[16]

Analysis of European firms' exposure to imports from China

Given the importance of China as a key trading partner for the European economy, the Banco de España, the Banca d'Italia and the Deutsche Bundesbank have conducted a harmonised survey of firms in their respective countries, to better understand the degree of their dependency on inputs from China.[17] In particular, the survey stresses the concept of dependence on "critical inputs", i.e. those inputs which, if supply were abruptly disrupted, would materially affect a firm's activity.

According to the survey's findings, around 20% of manufacturing firms in Spain and Italy and just over one-third of those in Germany import critical inputs from China (see Chart 7.a), with the vast majority of firms reporting that it would be difficult or very difficult to replace them. In Spain, however, only 22% of such firms have so far adopted specific measures to reduce their dependency, compared with 30% and 40% of their Italian and German counterparts, respectively (see Chart 7.b).

Any potential escalation of trade tensions between the West and China would have a negative impact on large parts of the economy, affecting around 40% of Spanish and Italian firms and 75% of German firms (see Chart 7.c). One particularly important channel – in addition to the usual trade ones – is uncertainty, as it acts as a magnifying mechanism for any geopolitical shocks to the rest of the economy.[18] Although the world is still broadly interconnected by major trade and financial flows, various risk scenarios envisaging greater global trade fragmentation are beginning to be countenanced, as the above analysis shows.

Chart 6
Main GNG suppliers to the EU (l-h panel) and Spain (r-h panel) (2024 Q2) (a)

SOURCES: Banco de España, drawing on estimates from Eurostat (for the EU) and Cores (for Spain).

a Share of GNG imported to the EU and Spain from different non-EU suppliers in 2024 Q2.

16 International Energy Agency (2022), "Special Report on Solar PV Global Supply Chains".

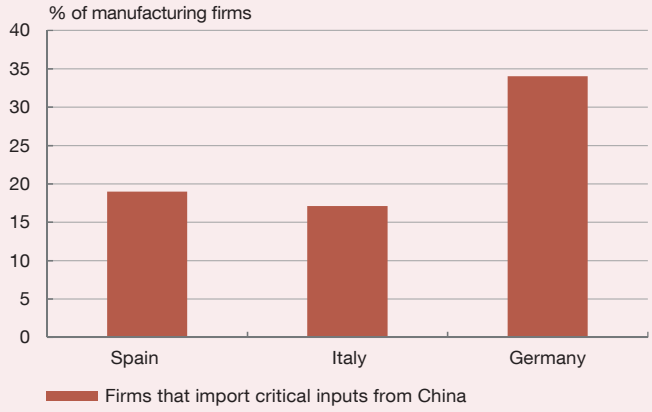
17 Irina Balteanu, Marco Bottone, Alejandro Fernández-Cerezo, Demosthenes Ioannou, Ambre Kutten, Michele Mancini and Richard Morris (2024), "European firms facing geopolitical risk: Evidence from recent Eurosystem surveys", VoxEU, and Irina Balteanu, Alejandro Fernández-Cerezo and Javier Quintana (2024), "Exposure of Spanish firms to imports of critical inputs from China: a survey-based analysis", *Economic Bulletin - Banco de España,* 2024/Q4, 02.

18 This is consistent with the literature that links geopolitical tensions, uncertainty and economic activity. See, for example, Dario Caldara and Matteo Iacoviello (2022), "Measuring Geopolitical Risk", American Economic Review, 112(4), pp. 1194-1225, and Scott R. Baker, Nicholas Bloom and Steven J. Davis (2016), "Measuring Economic Policy Uncertainty", *The Quarterly Journal of Economics,* Volume 131, Issue 4. pp. 1593-1636.

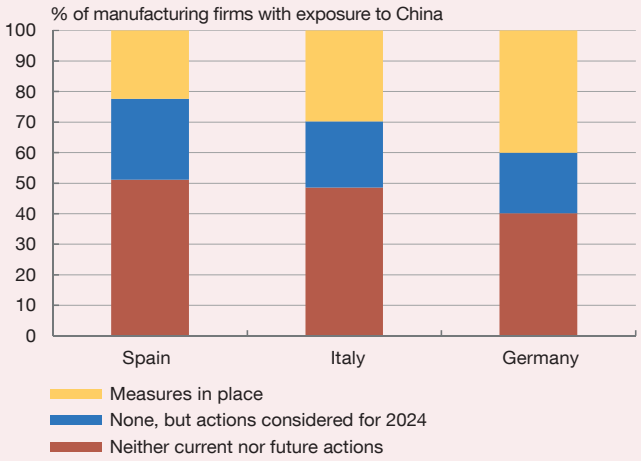
Specifically, an increase in geopolitical tensions that raises China-EU trade costs could have a considerable bearing on the European economic outlook.[19] As well as demand being adversely affected by a drop in exports, trade fragmentation would sharply drive up production costs. This adverse impact on supply would

Chart 7
Exposure of European manufacturers to China

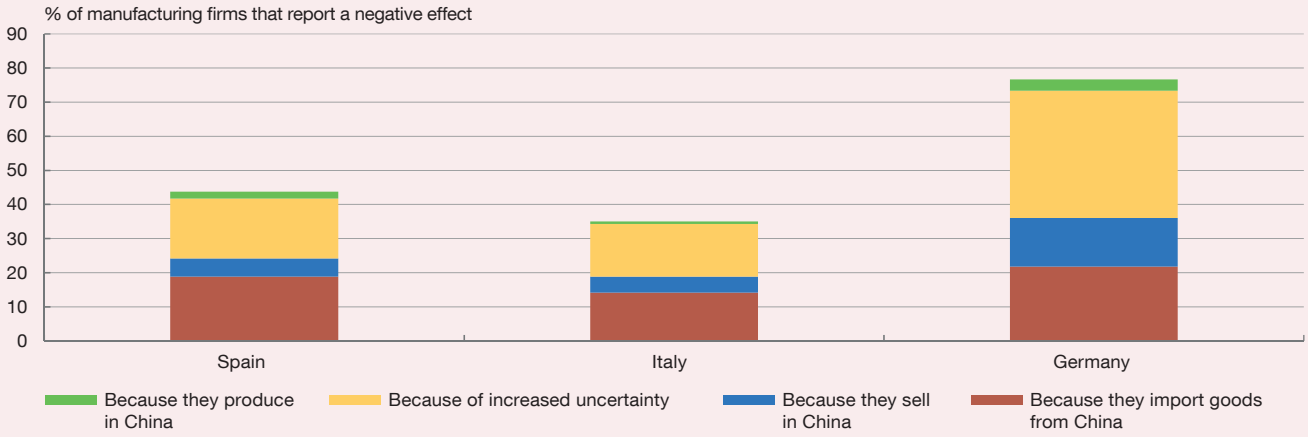
7.a Manufacturing firms that import critical inputs from China (a)



7.b Manufacturing firms' measures to reduce exposure to China (b)



7.c Impact of a potential increase in trade tensions between China and the West (c)



SOURCES: Banco de España, Banca d'Italia, Deutsche Bundesbank and Balteanu et al. (2024).

a Manufacturing firms with more than 20 employees. Critical inputs are those without which an important part of the firm's production process could not be performed or would be significantly delayed, or the quality of its goods or services would deteriorate. The responses are weighted to obtain representative results for the population of firms in the respective country.

b Firms' responses to the question: "If your firm imports critical inputs from China, has it taken or is it planning to take any measures to reduce its dependence on such imports?". Possible answers: 1) "No, none have been taken and none are planned"; 2) "None have been taken, but some measures are planned for the next 12 months"; 3) "Yes, they have been replaced with inputs produced in Spain or produced in-house"; 4) "Yes, they have been replaced with inputs produced in other EU countries"; 5) "Yes, they have been replaced with inputs produced in other non-EU countries"; and 6) "Yes, measures different from those mentioned above have been implemented". Only manufacturing firms with more than 20 employees.

c Firms' responses to the question: "How do you think your firm would be affected by an increase in tensions between China and Western countries (including the EU) in the coming months, potentially resulting in new tariffs, non-tariff measures or restrictions on foreign investment?". Possible answers: 1) "No significant effect"; 2) "Positively"; 3) "Negatively, because our firm uses inputs from China"; 4) "Negatively, because our firm sells (directly or through intermediaries) products and services to firms or consumers in China"; 5) "Negatively, because a portion of our firm/group's production is located in China"; and 6) "Negatively, due to increased uncertainty over future economic developments". Manufacturing firms with more than 20 employees.

19 See Javier Quintana (2024), "The dynamics of trade fragmentation: a network approach", *Documentos de Trabajo, Banco de España,* forthcoming, for an analysis of the dynamic effects on euro area economic activity of an increase in the cost of trade between China and Organisation for Economic Co-operation and Development countries, both under a mild scenario (in which trade flows between opposing blocs are ultimately reduced by around 50% over the long term) and under a severe scenario (in which they practically disappear within a decade).

stem from the higher cost of both intermediate inputs and capital goods.

In the short term, the adverse effects would be chiefly attributable to the higher intermediate input costs, the difficulty in replacing suppliers and the spillovers resulting from these shocks spreading through the multi-sector production network. The impact should gradually ease as European producers become increasingly able to replace Chinese suppliers. Meanwhile, the higher cost of capital goods will tend to permanently curtail investment, which will have more persistent effects on activity.

Additional considerations

Lastly, it is important to note that geopolitical risks may also be transmitted through financial channels, in addition to the trade channels highlighted in this box. For instance, a rise in risk aversion attributable to an adverse geopolitical event could result in sharp asset price adjustments, changes in capital flows and widening sovereign spreads.[20] In the same vein, mention should be made of the risks to the security of institutions and critical financial infrastructure owing to the physical risks associated with conflicts or cyber threats, as well as those associated with a fragmentation of international payment systems.

20 Some empirical evidence suggests that, when exposed to an increase in trade uncertainty through their exporting and/or importing customers, private banks tend to curb lending and tighten financing conditions for the entire economy, even for firms that are not directly exposed to the trade tensions. See, for example, Ricardo Correa, Julian di Giovanni, Lisa S. Goldberg and Camelia Minoiu (2023), "Trade Uncertainty and U.S. Bank Lending", CEPR Discussion Paper, 18631.

Box 1.2

THE RISKS TO FINANCIAL STABILITY OF A POTENTIAL TECH STOCK CORRECTION

Rapid technological progress in recent years, driven above all by digitalisation and the development of generative artificial intelligence (AI) models, has made many firms keen to adopt new technologies in their productive processes. Specifically, through routine task automation and human-AI complementarity in complex tasks, AI can boost productivity by making processes more efficient and fostering greater product innovation.[1]

These developments have given a significant boost to the business opportunities and earnings expectations of firms offering products and services linked to new technologies. The main global firms that carry out these activities are based in the United States and their shares are traded on US stock markets.

Favourable earnings expectations have sparked a surge in tech stock prices in recent years. Since early 2019, the Nasdaq-100, home to the main US tech stocks, has seen cumulative gains of over 220%, versus 132% on the S&P 500 (see Chart 1). The stock prices of some of these firms, such as Nvidia and Tesla, have shot up in this period, gaining 4,110% and 1,083%, respectively.

The increase in stock prices has resulted in historically high market value ratios. For example, the price-to-earnings (P/E) ratio, calculated by dividing a firm's share price by its earnings per share, is currently above its historical average for both the S&P 500 and the Nasdaq-100 (see Chart 2). This reflects the market expectations that these firms will generate much higher earnings in the future, anticipating that the new technologies will have far-reaching effects and that these companies will be highly capable of reaping the rewards.

The surge in tech stocks prices has increased tech firms' weight in the broad US stock market indices significantly. For instance, depending on the firms considered, they account for 32%-45% of the S&P 500 (see Chart 3). By contrast, their index weight is considerably lower in Europe: around 14% of the EURO STOXX (see Chart 4). In absolute terms, the market capitalisation of the S&P 500 technology index[2] was around 29 times that of the EURO STOXX Technology index at the end of October.

Tech firms' current situation shares some similarities with the global dot-com bubble episode of the early 2000s.

Chart 1
US stock market indices

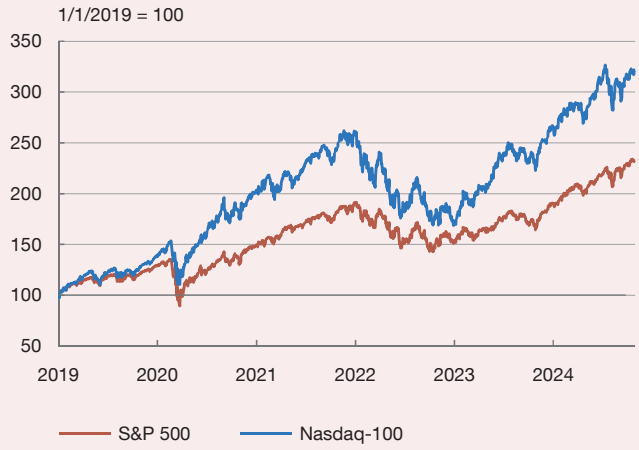
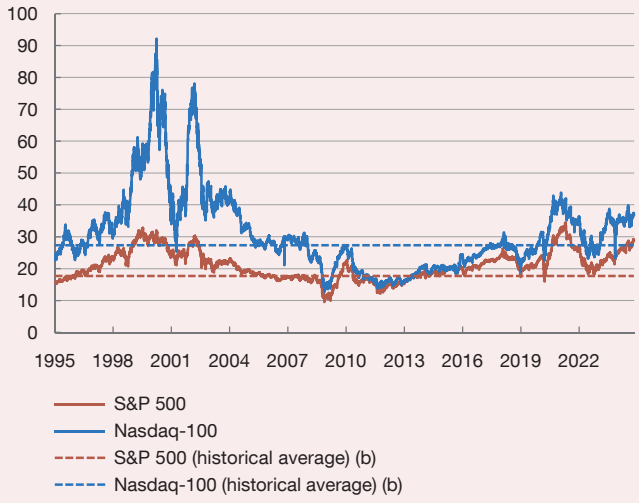


Chart 2
P/E ratio. US stock market indices (a)



SOURCES: Refinitiv Datastream and Banco de España.

a The P/E ratio reflects the relationship between stock price and earnings per share.
b Historical average since 1973.

1 For a more detailed discussion of AI developments and their macroeconomic and financial sector implications, see, for example, Chapter 3 of Bank for International Settlements. (2024). *Annual Economic Report*.

2 The S&P 500 Information Technology (IT) index plus the Magnificent Seven firms not included in that index (see note b to Chart 3).

During this period, their share prices also saw significantly stronger growth than other economic sectors: the Nasdaq-100 climbed by 716% between early 1996 and the peak of the bubble in March 2000, versus the S&P 500 which rose by 147% (see Chart 5).[3]

Optimism about the internet's transformative potential underpinned the gains in tech stock prices, with the P/E ratio of the Nasdaq-100 reaching an all-time high in early 2000 (see Chart 2). However, these high values proved unsustainable and the main tech indices around the world underwent a sharp correction: between March 2000 and end-2002, the Nasdaq-100 lost 79% of its value.[4]

This correction had a relatively small impact on the US economy, thanks to the tech sector's low level of debt, the financial sector's limited exposure to internet-related firms and the fact that share holdings were concentrated on higher income earners, which softened the fall in aggregate demand.[5] Even so, the correction in tech stock prices, together with other factors, meant that the US economy experienced a shallow recession between March and November 2001,[6] with the unemployment rate reaching 5.5%. Meanwhile, the euro area economies – above all the region's core countries – slowed down considerably in 2001.[7]

Chart 3
Capitalisation of the S&P 500 technology indices

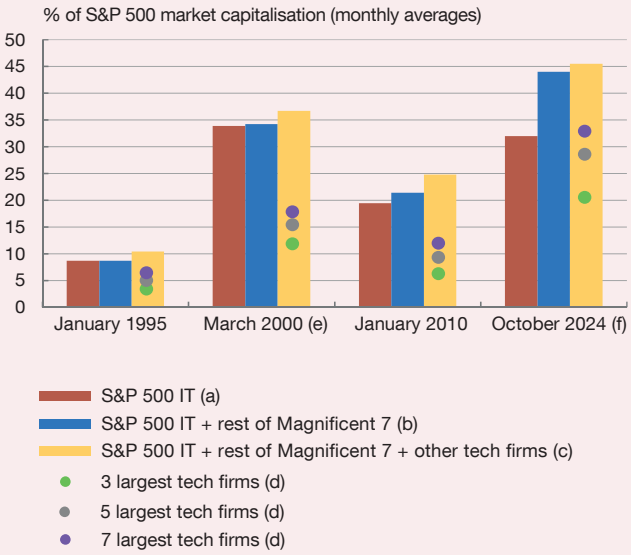
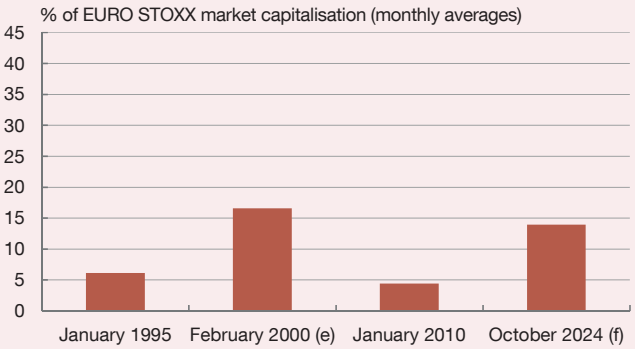


Chart 4
Capitalisation of the EURO STOXX Technology index (g)



SOURCES: Refinitiv Datastream and Banco de España.

a S&P 500 IT, comprising 67 firms, including three of the Magnificent Seven (Microsoft, Apple and, since March 2000, Nvidia).
b S&P 500 IT + rest of the Magnificent Seven: includes Amazon and Alphabet since March 2000 and Meta and Tesla since September 2024.
c S&P 500 IT + rest of the Magnificent Seven (see note b) + some of the most relevant tech firms during the dot-com period (ATT, Automatic Data Proc, Comcast, Ebay, Electronic Arts, Jack Henry & Associates, SBA Comms. and Verizon).
d Market capitalisation of the three, five and seven largest tech firms as a percentage of the broad aggregate shown in note c above.
e Month of 2000 in which, in average terms, the capitalisations of the S&P 500 and EURO STOXX technology indices as a percentage of the broad index peaked (March 2000 and February 2000, respectively).
f Monthly average up to 28/10/2024.
g EURO STOXX Technology, comprising 20 firms.

3 The Nasdaq-100 peaked on 27 March 2000. There is no consensus over when the dot-com bubble episode began. Between early 1990 and the peak of the bubble the index gained 2,002%. Calculated from 1998, the gains amounted to 375%. For more details, see J. Bradford DeLong and Konstantin Magin. (2006). "A Short Note on the Size of the Dot-Com Bubble". NBER Working Papers, 12011, National Bureau of Economic Research.

4 The more tech-oriented European indices also experienced deep corrections. For example, the German NEMAX 50 index fell by more than 90% and was subsequently discontinued. See William Quinn and John D. Turner. (2020). "Chapter 9. The Dot-Com Bubble". In *Boom and Bust: A Global History of Financial Bubbles.* Cambridge: Cambridge University Press, pp. 152-169.

5 *Ibid.*

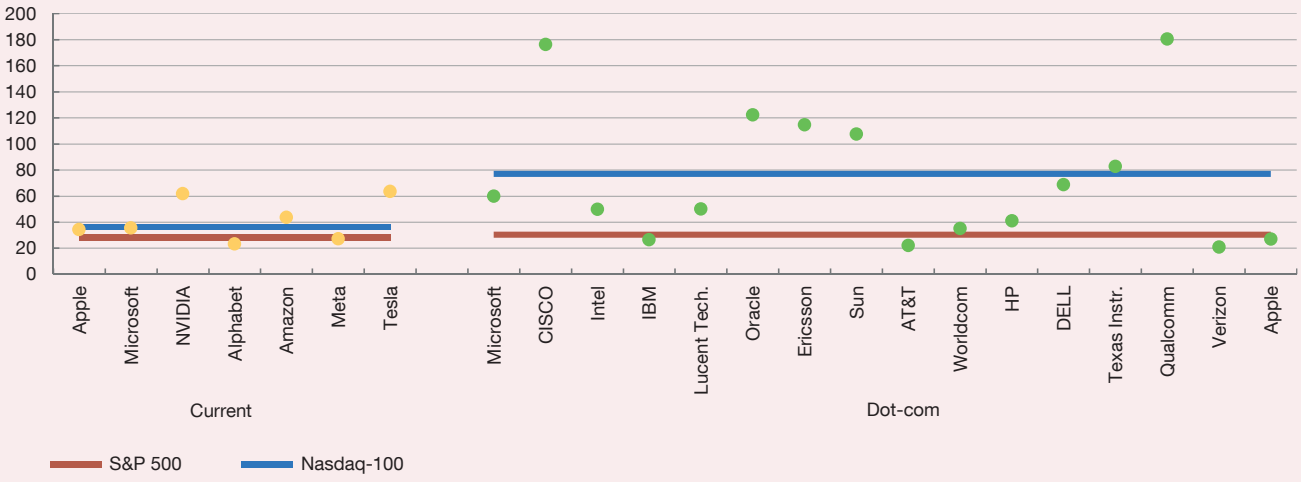
6 For more information, see the National Bureau of Economic Research announcement of 17 July 2003 and NBER Business Cycle Dating.

US tech firms' stock market position is not, however, identical to that of the dot-com bubble. There are some key differences. First, as depicted in Chart 2, while the Nasdaq-100's P/E ratio has increased – with fluctuations – in recent years and stands above its historical average, it is far from the highs recorded during the 2000 bubble. A more granular analysis for a selection of firms from the two periods – the current Magnificent Seven and a group of relevant firms from the dot-com era – confirms that, in general, today's tech firms, with the highest market capitalisation, have a more contained P/E ratio than several of the dot-com firms during the 2000 bubble (see Chart 6).

Chart 5
US stock market indices

SOURCES: Refinitiv Datastream and Banco de España.

Chart 6
Price-to-earnings (P/E) ratio (a)



SOURCES: Refinitiv Datastream and Banco de España.

a The P/E ratio measures a firm's share price relative to its observed earnings per share. Data provided by Refinitiv Datastream for the "Magnificent Seven" (ordered from highest to lowest capitalisation) in the current period (August-October 2024 average) and for some relevant tech firms in the dotcom period (January-March 2000 average). The lines represent the average values of the S&P 500 and Nasdaq-100 indices in the current and dot-com periods. Not all firms shown in the dot-com period are included in the S&P 500 or Nasdaq-100 indices.

7 For further details, see the Banco de España's *Annual Report 2001*.

Another key difference is that, compared with the ecosystem of many small and young tech firms in the early 2000s, today's tech leaders have cemented their position, meaning they could be better placed to retain the earnings from new technologies such as AI. In addition, these technologies, unlike those developed during the dot-com episode, are characterised by their robust network effects and product customisability. This entails a very strong tendency towards concentration, which reinforces their ability to harness the economic value they create for their customers.

However, in the current period, the concentration of market capitalisation among a handful of firms increases the potential systemic impact of idiosyncratic risks linked to those companies, should they materialise. For instance, the three largest US technology firms (Apple, Microsoft and Nvidia) currently account for roughly 20% of the S&P 500, far more than their equivalents at the height of the dot-com bubble (just over 11%) (see Chart 3).

Given their current high levels, tech stock prices are at risk of abrupt corrections, which could be triggered if these companies' earnings fail to grow as quickly as the markets expect. Here, it is important to note the significant uncertainty surrounding the potential profits associated with new technologies and how long they will take to materialise. Indeed, in the most recent period technology firms' stock prices have been particularly sensitive to their earnings releases.

A case in point is the recent correction in the share price of ASML Holding, one of Europe's largest technology firms. The company's shares plunged 15.6% in a single day after it announced lower than expected earnings guidance on the back of weak chip demand. The correction spread to other global chipmakers, whose stock prices declined more moderately.[8]

Moreover, the earnings of the most innovative firms are subject to risks associated with, inter alia, the emergence of new competitors, regulatory changes and potential global supply chain problems, against a backdrop of high geopolitical tensions and trade conflicts.

The transition to a carbon-neutral economy could also impact their business, as some of these companies are energy-intensive and might be constrained by the need to reduce emissions. In other cases, demand for their products could rise as the transition gathers pace (e.g. electric vehicles).

Lastly, the share prices of technology firms are highly sensitive to shifts in the macro-financial environment. This is because tech stock prices, more than those of other firms, reflect the discounted present value of strong future earnings expectations. Thus, lower than anticipated economic growth or unexpectedly high inflation that leads to an upward revision of interest rate expectations could have a particularly adverse impact on tech stock prices.

A potential correction in tech stock prices could affect financial stability through a number of channels. First, consumption and economic activity would suffer due to the decrease in the wealth of these firms' shareholders and the potential erosion of agents' confidence. The fact that these firms' market capitalisation has a large weight in US broad indices means that any stock price correction could be far-reaching. The declines could spread to other firms and markets, such as those in Europe, through various mechanisms. These include those associated with heightened global risk aversion or potential fire sales by investment funds in the event of a significant increase in redemptions.

Moreover, lower stock prices would affect the tech firms themselves, diminishing their capacity to raise equity financing, while also potentially increasing the cost of bond or bank loan financing. This reduced financing capacity would, in turn, make it harder for them to sustain the high investment levels[9] on which their future earnings growth largely relies.

Lastly, these corrections could affect banks' capacity to lend if they are highly exposed to such firms or if banks' share prices were severely hit by the shock.

To assess the possible direct effects of a potential correction in tech firms' share prices, it is useful to start by analysing their ownership structure. As Chart 7 shows,

8 Similarly, Meta shares suffered single-day drops of 26% in February 2022 and of 24% in October 2022, following the release of quarterly earnings.

9 At June 2024, the annual investment of the "Magnificent Seven" US tech firms represented, on average, 11% of their assets and 56% of their after-tax profit.

most of the capital of the top seven US tech firms by market capitalisation is held by investment funds (54.8%) and retail investors (30%). Among investment funds, it may be reasonably assumed that most of the ultimate holders are natural persons.[10] Meanwhile, as Chart 8 shows, these investment funds are mostly domiciled in the United States, although the unit-holders may be more geographically dispersed. This ownership structure means that the wealth effects described above and the possible amplifying factors, through investment funds and an overall increase in risk aversion and liquidity constraints on the financial markets, may be significant. Conversely, direct contagion to banks through shareholdings would be very limited given their low exposure.

Information available on the balance sheet structure of the top seven US tech firms reveals that most operate with low leverage and a high degree of equity financing (over 50% on average) (see Chart 9). Moreover, most of them have sufficient liquid assets to cover a large share or all of their credit obligations (see Chart 10). This balance sheet structure should mean that tech firms are well placed to cushion potential financial problems associated with a share price correction, which would help contain their credit quality deterioration.

To sum up, the high share values of tech firms pose some risks to global financial stability, given that they account for such a high proportion of US stock market capitalisation. Specifically, if the earnings growth of these companies falls substantially short of market expectations, they could experience sharp corrections in their share prices that could spill over into other assets and markets.

Compared with the dot-com bubble of the 2000s, today these risks seem more contained, as stock valuation metrics are closer to historical averages. In addition, leading tech firms are now more consolidated and, therefore, in comparison with some pioneering internet firms in the 2000s, are better positioned to retain the benefits of new technologies such as AI, thanks also to the network effects that these technologies entail. Nevertheless, today's higher

Chart 7
Ownership structure of main US tech firms by institutional sector (a)

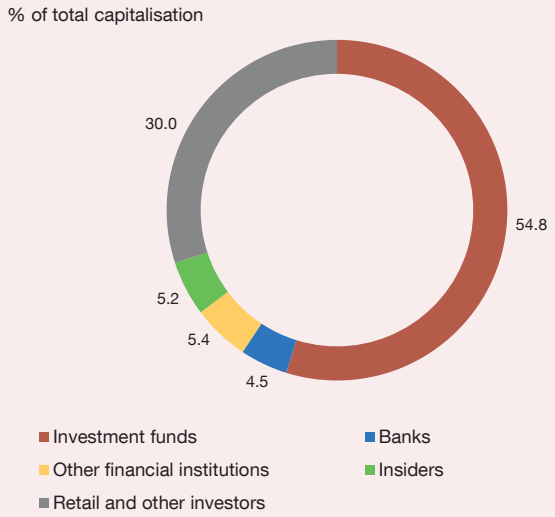
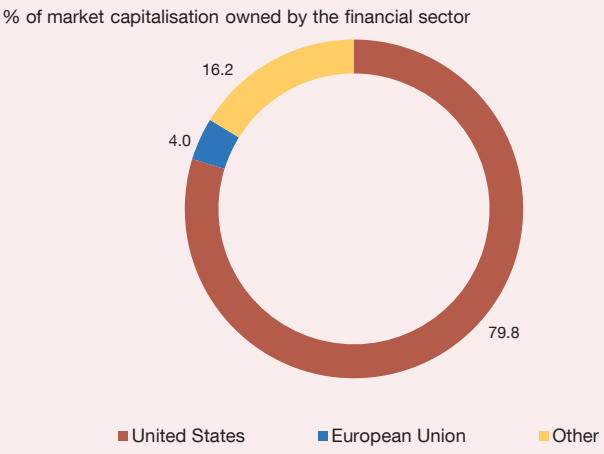


Chart 8
Geographical distribution of financial sector ownership of main US tech firms (a)



SOURCE: Capital IQ.

a Average weighted by market capitalisation for the top seven US tech firms: Alphabet, Amazon, Apple, Meta, Microsoft, Nvidia and Tesla.

10 According to Investment Company Institute data, in 2023 households held 88% of the shares (units) of US investment funds, and 95% in the case of long-term investment funds. More than half of all US households held such investments, which accounted on average for 22% of their savings.

level of concentration of market capitalisation across just a few firms increases the systemic importance of the risks associated with this sector.

The risk of bank-level contagion of a possible stock price correction appears contained, given banks' low exposure to tech firms' capital and the healthy structure of most tech firms' balance sheets. However, the potential amplifying effects through investment funds could be comparatively more significant, in view of their high shareholdings in tech firms. Lastly, while the United States would foreseeably see the most impact, significant global effects could also be expected, given the high interconnectedness of the financial markets.

Chart 9
Sources of funding of main US tech firms. June 2024

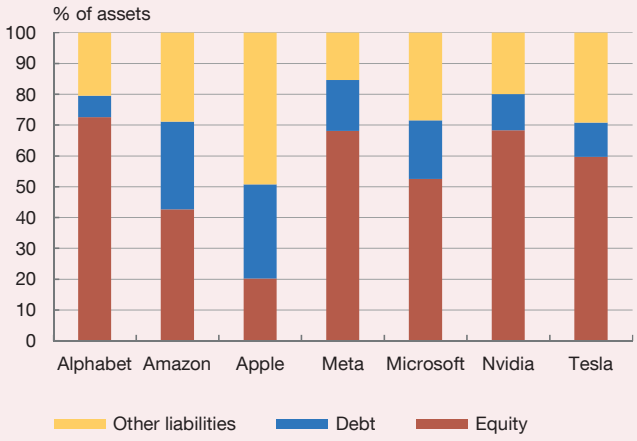
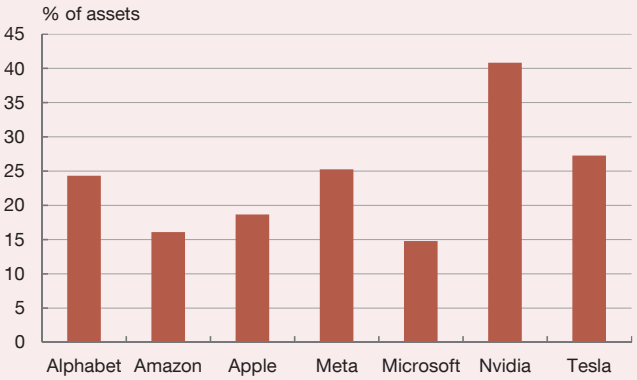


Chart 10
Liquidity of main US tech firms. June 2024 (a)



SOURCE: Capital IQ.

a Liquidity is defined as the sum of cash and cash equivalents, short-term investments and trading asset securities.

2

FINANCIAL SECTOR RISKS AND RESILIENCE

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

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

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

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

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

2.1 Deposit institutions

2.1.1 Balance sheet structure, risks and vulnerabilities

Credit risk

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

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

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

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

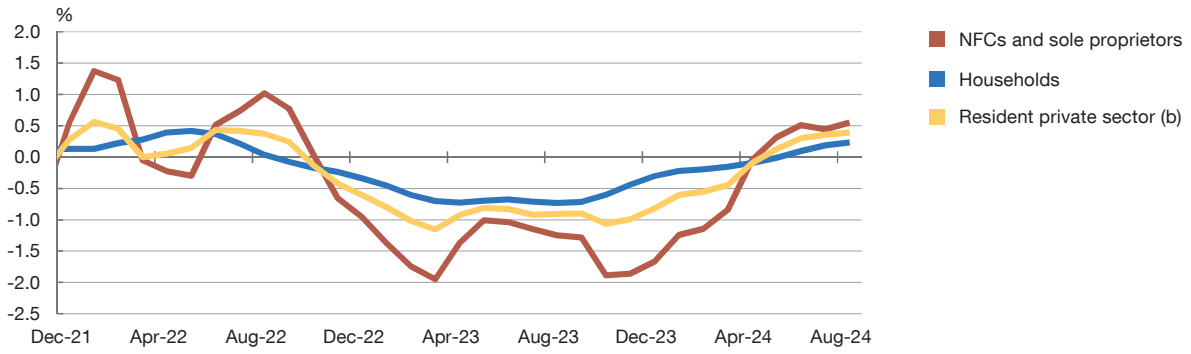
The non-performing loan (NPL) ratio for loans to the resident private sector in Spain held steady in the 12 months to June 2024. Indeed, the ratio stood at 3.3% in June 2024,

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

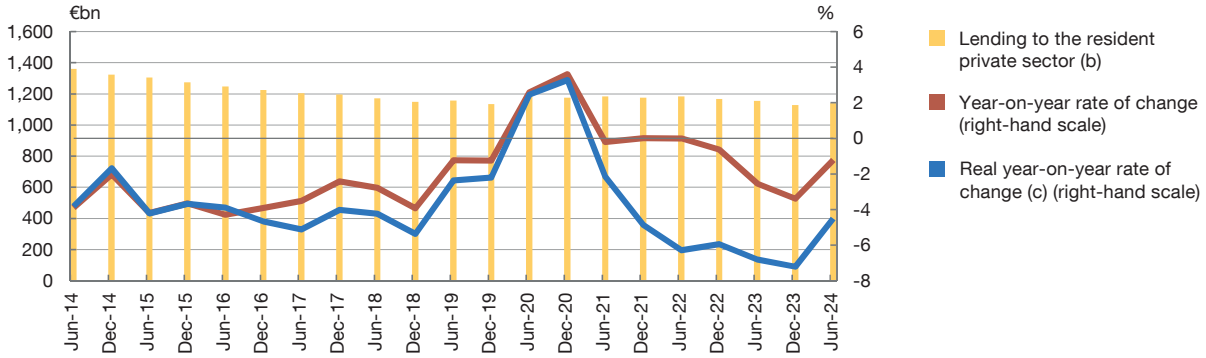
Chart 2.1

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

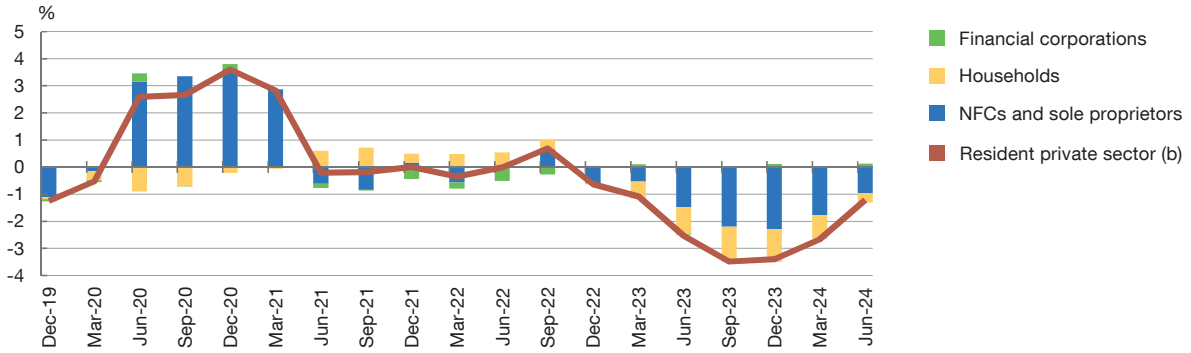
2.1.a Indicator of change in lending to the resident private sector (a). Business in Spain. ID



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



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



SOURCE: Banco de España.

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

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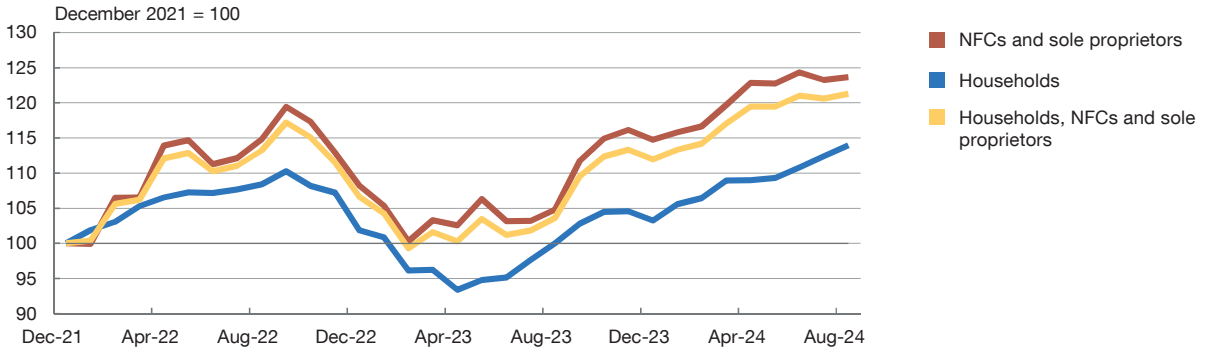
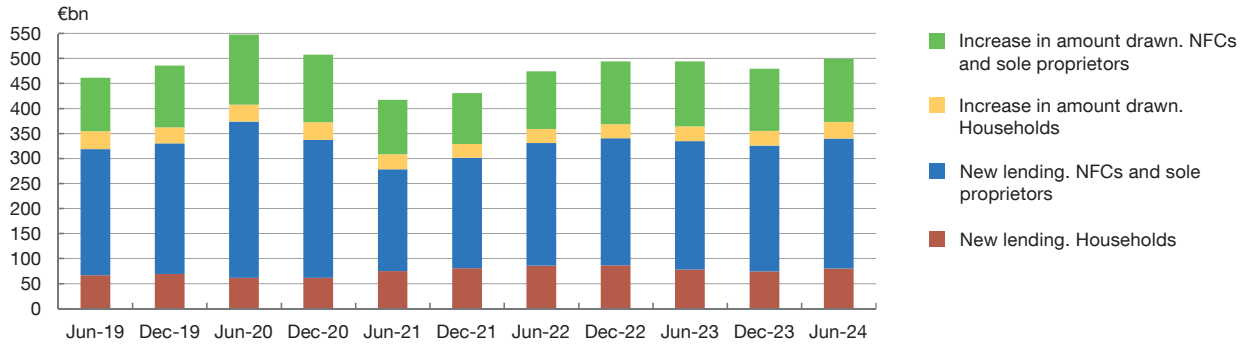
Chart 2.2

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

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



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



SOURCE: Banco de España.

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

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

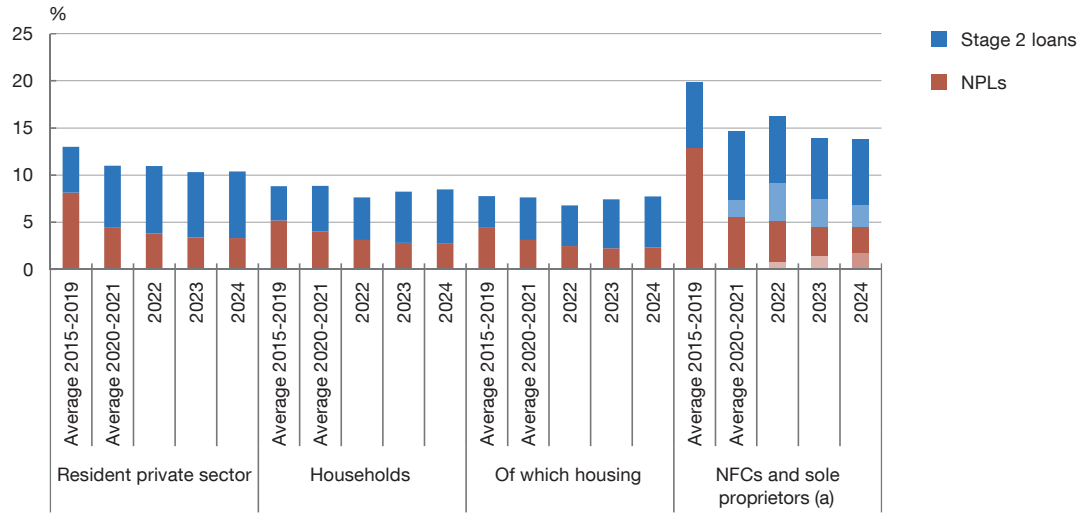
In loans to NFCs and sole proprietors, the NPL ratio stood at 4.5% at the end of 2024 H1, with no appreciable year-on-year change. This portfolio's NPL ratio dropped by 4.1% year-on-year in June 2024, a rate of decline 4.7 pp lower than in December 2023 (see Chart 2.3.b). The drop in NPLs was similar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

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

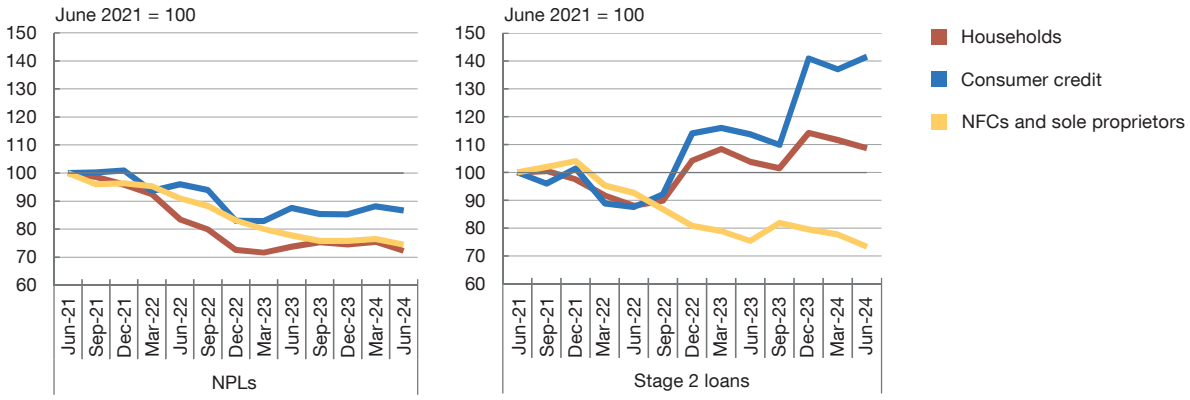
Chart 2.3

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

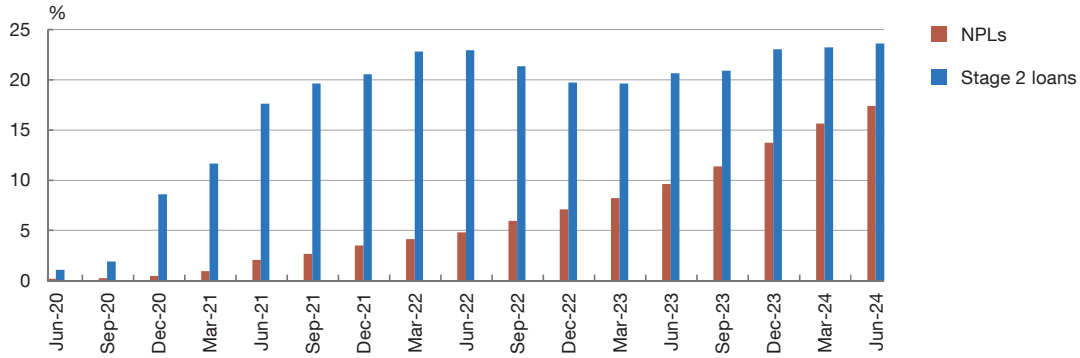
2.3.a Share of NPLs and Stage 2 loans. At June of each year. Business in Spain. ID



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



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



SOURCE: Banco de España.

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

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

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

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

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

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

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

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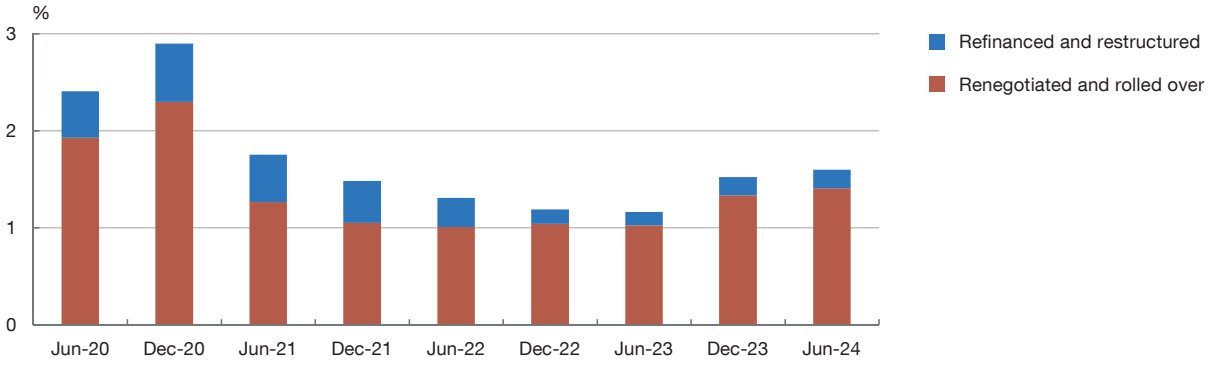
2 It should be noted that this portfolio is closed (no new loans are being extended), so any drop in the exposure necessarily drives up the NPL and Stage 2 ratios. For example, had the denominator of the NPL and Stage 2 ratios remained unchanged since June 2023, they would have been 12.1% and 16.4%,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

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

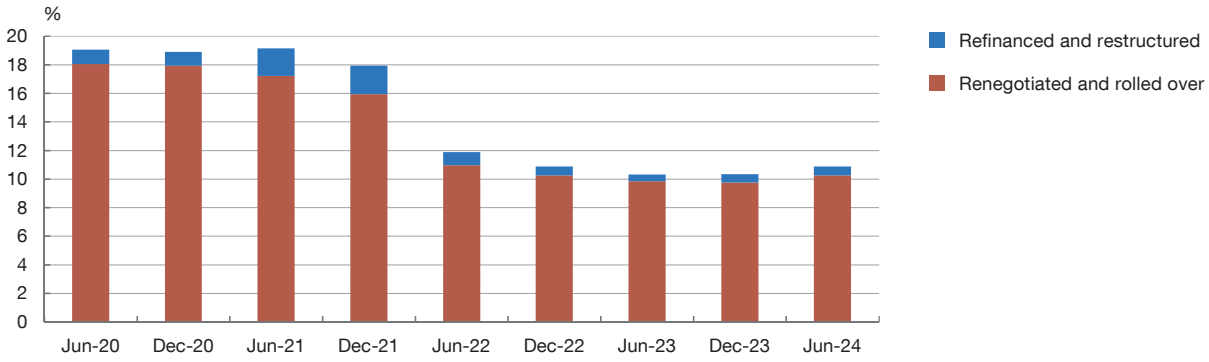
Chart 2.4

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

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



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



SOURCE: Banco de España.

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

Financial assets in the consolidated business

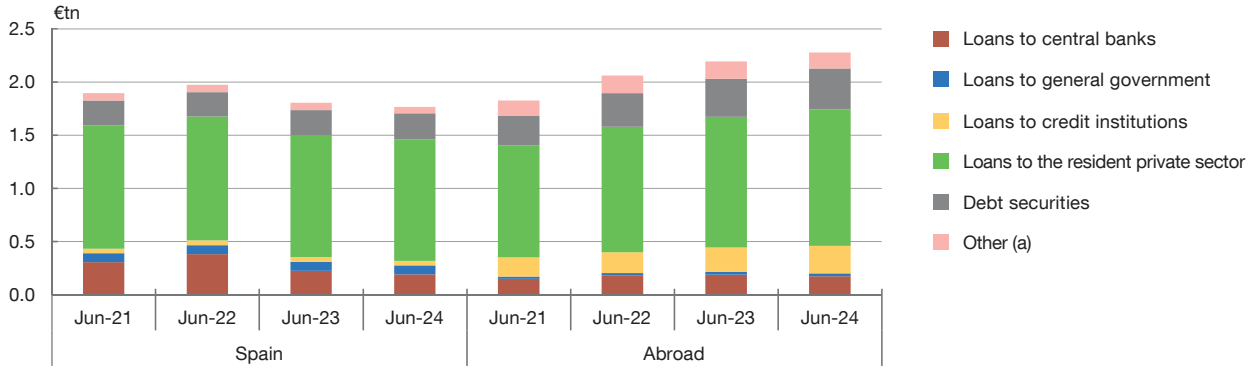
The share of foreign business has seen sustained growth in recent years among Spanish deposit institutions as a whole, although it moderated in 2024 H1. Financial assets abroad accounted for 56.4% of total consolidated assets at the end of 2024 H1, with a year-on-year increase of 3.9%, 2.3 pp below the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

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

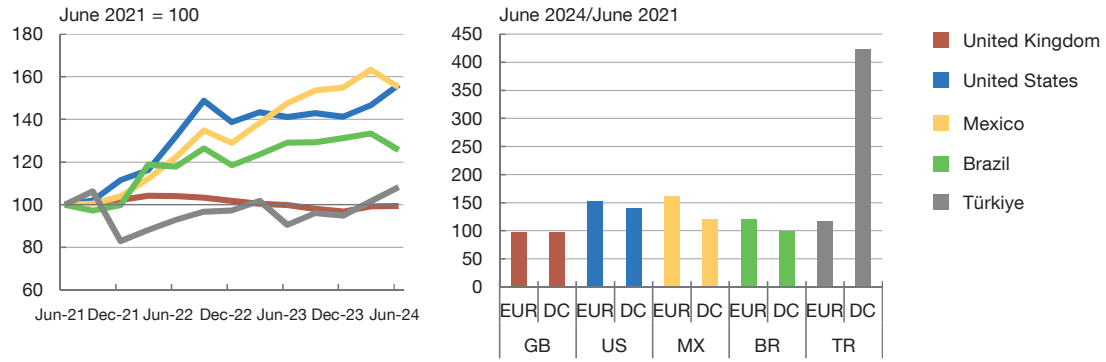
Chart 2.5

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

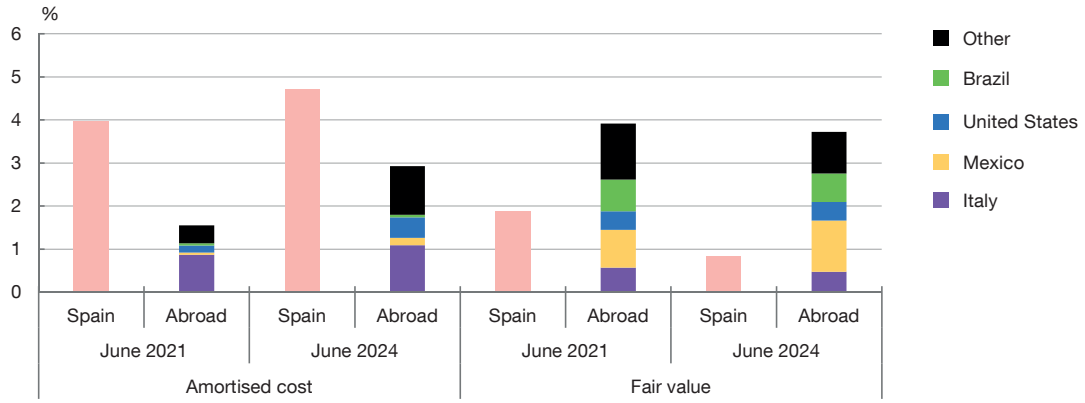
2.5.a Financial assets in Spain and abroad, by asset type. Consolidated data



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



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



SOURCE: Banco de España.

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

growth rates recorded in Türkiye (19.7%, 22 pp up on December 2023) the United States (10.8%, 9 pp up on December) and Mexico (5.1%, 15 pp down). In the United Kingdom, there was a 0.5% fall in lending, compared with a 5% drop in December 2023. Since June 2021, the minor appreciation of the US, Brazilian and Mexican currencies has driven growth in exposures

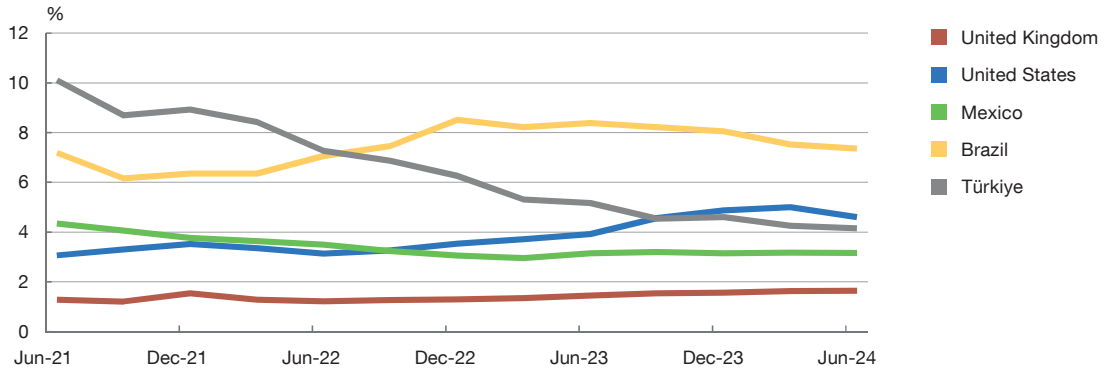
in these countries. In Türkiye, however, strong domestic growth was hampered by the depreciating lira in a strongly inflationary environment (see Chart 2.5.b).

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

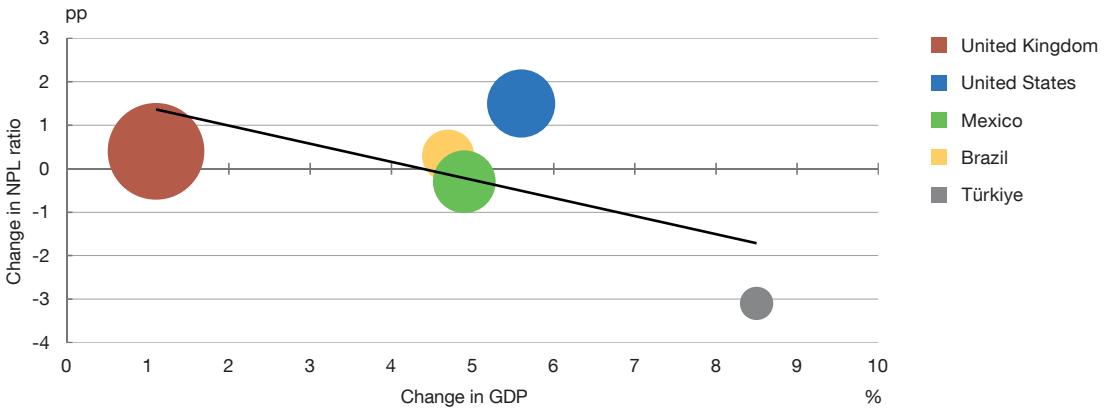
Chart 2.6

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

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



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



SOURCE: Banco de España.

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

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

Liquidity and financing conditions

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

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

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

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

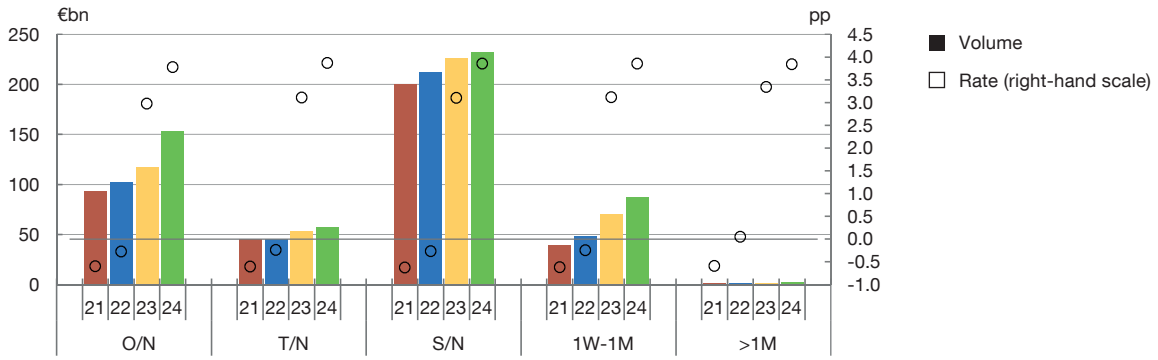
4 In 2022, when the repo-DFR spread widened significantly, the main objective for conducting repo transactions was to obtain collateral. When a participant seeks collateral in exchange for liquidity, an increase (decrease) in demand for collateral pushes rates downwards (upwards).

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

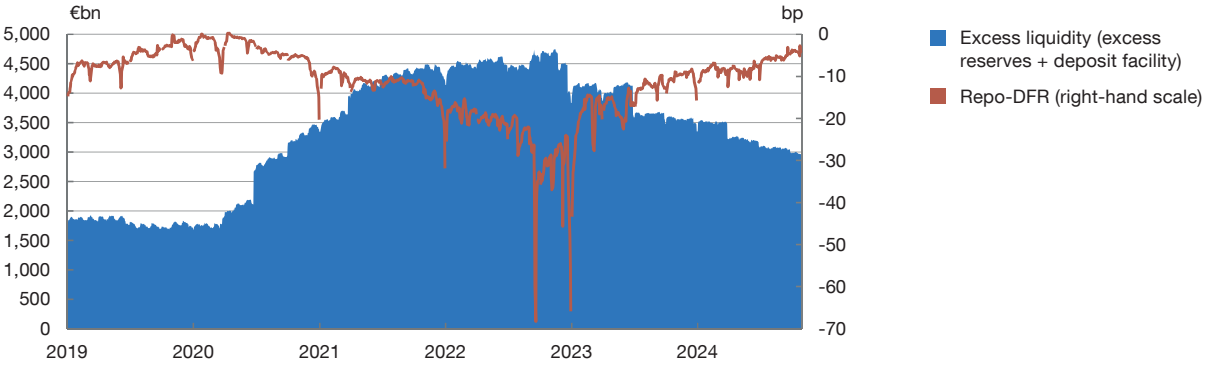
Chart 2.7

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

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



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



SOURCE: MMSR.

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

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

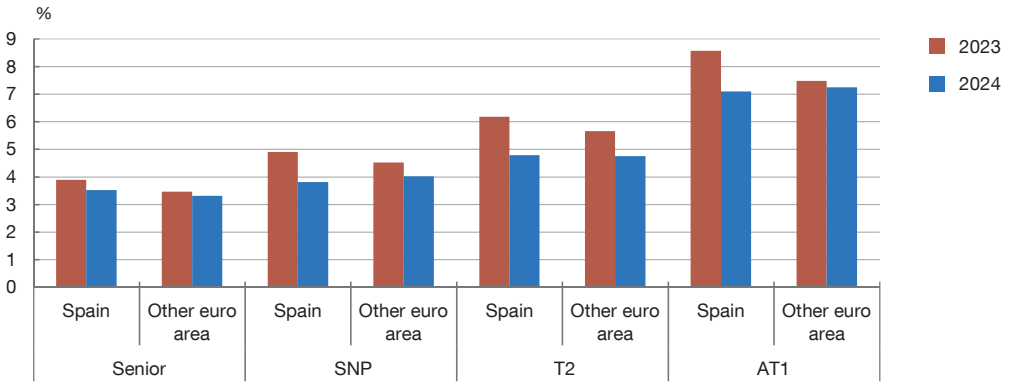
an increase in the volume of senior non-preferred (SNP) debt issuance (see Chart 2.8.b), with smaller banks participating, albeit at a slightly higher cost than other Spanish institutions. Lastly, the share of (secured and unsecured) senior issues in total issuance fell compared to the prior year, when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

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

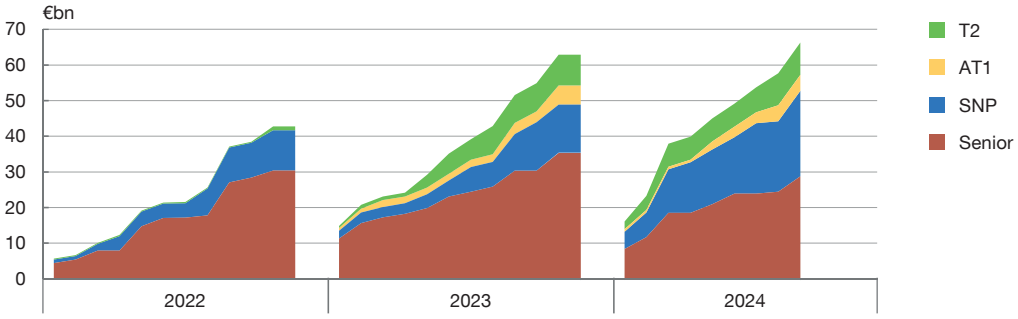
Chart 2.8

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

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



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



SOURCES: Dealogic and Banco de España.

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

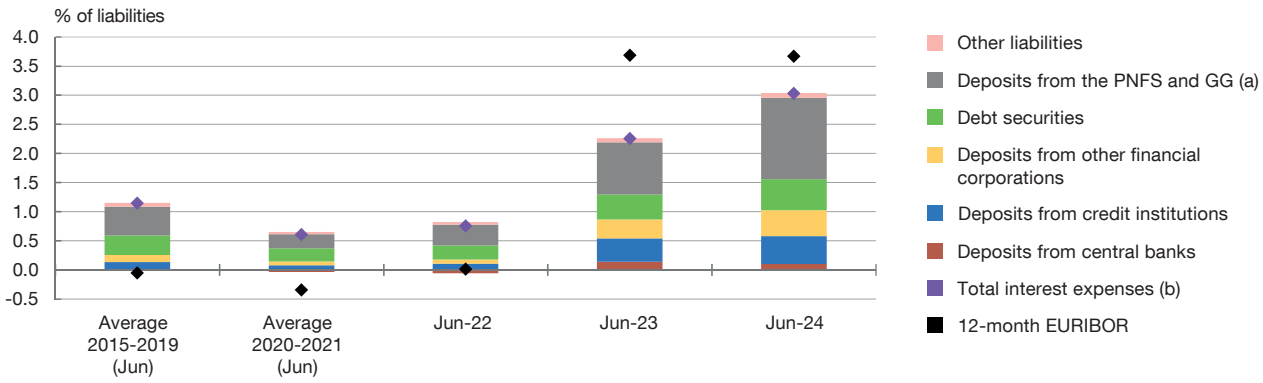
remained below that of other liabilities, these deposits make a large contribution to the average cost of bank liabilities as they are the main source of bank funding. The cost of funding from credit institutions, other financial corporations and bank debt also increased markedly in year-on-year terms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

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

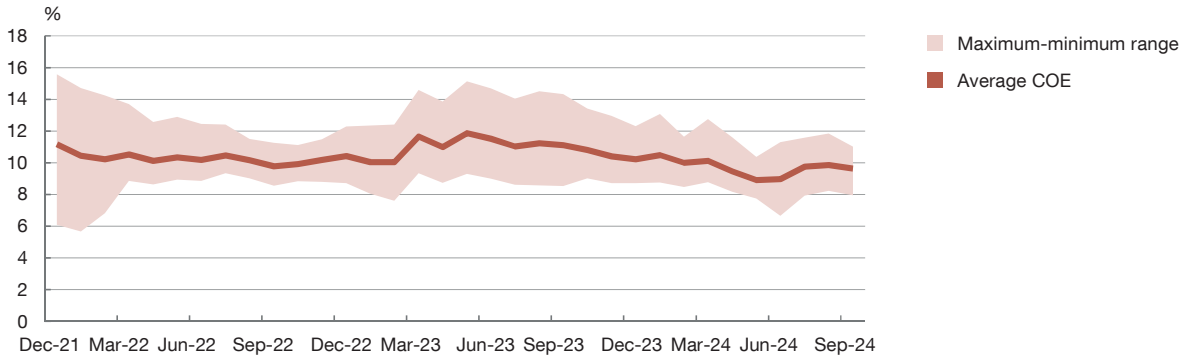
Chart 2.9

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

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



2.9.b Cost of equity (c)



SOURCE: Banco de España.

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

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

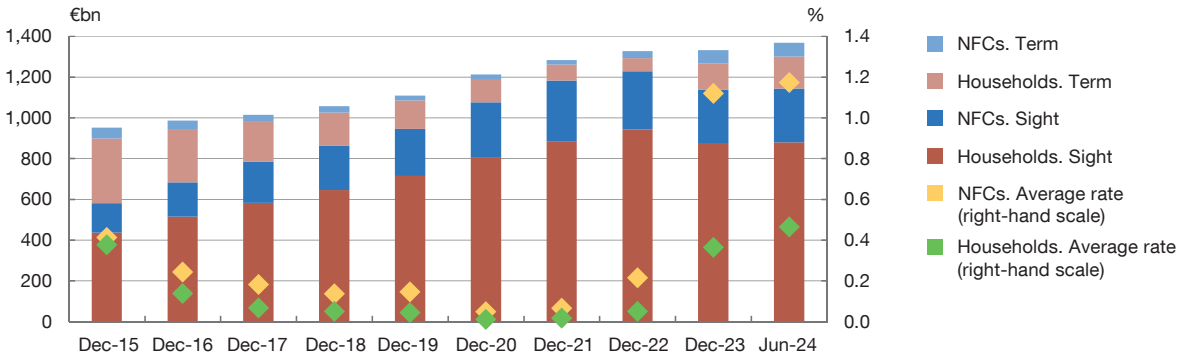
The average remuneration on household and NFC deposits in Spain continued to rise in 2024 H1, while funds have continued to flow from sight accounts to longer-term deposits. The total volume of non-financial private sector deposits in Spain rose by 5.2% year-on-year in

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

Chart 2.10

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

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



SOURCE: Banco de España.

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

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

2.1.2 Profitability and solvency

Profitability

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

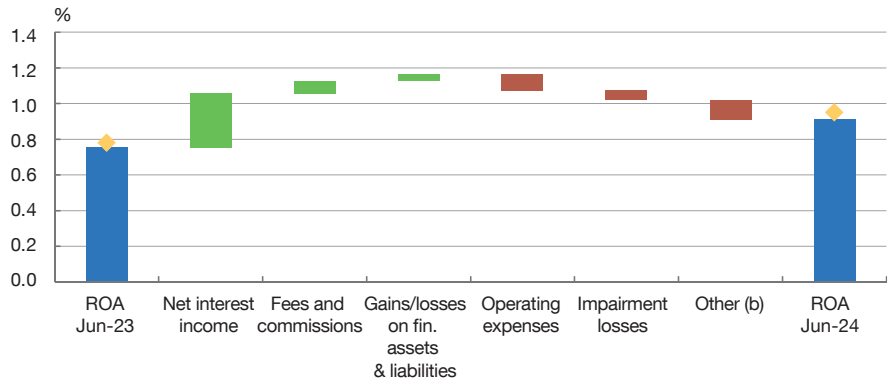
7 The LCR is defined as the ratio between a bank's unencumbered liquid assets and potential net liquidity outflows during a 30 calendar-day stress period. A level over 100% indicates that the bank holds sufficient liquid assets to cover potential liquidity outflows in a stress scenario.

8 The NSFR is defined as the ratio of a bank's available stable funding to its required stable funding for a period of one year. A level over 100% indicates that the bank has sufficient stable funding to satisfy its financing needs over one year, both in normal conditions and in a stress scenario.

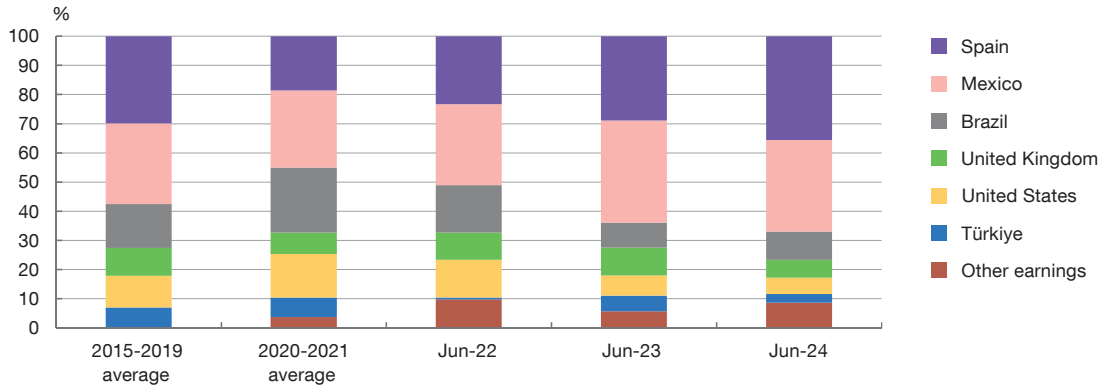
Chart 2.11

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

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



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



SOURCES: Banco de España and banks' financial reports.

a The red (green) colour of the bars denotes a negative (positive) contribution of the corresponding item to the change in consolidated profit at June 2024 compared with June 2023. The yellow diamonds denote the ROA excluding the impact of the temporary levy on the banking sector.
b Includes, among other items, the temporary levy on the banking sector mentioned in the previous note.
c The group of banks with significant international activity includes the three in which such activity is most important and longest-running, with profit measured excluding non-recurring items in the period considered. The "Other earnings" category includes earnings in other countries and those of the banks' corporate centres.

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

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

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

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

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

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

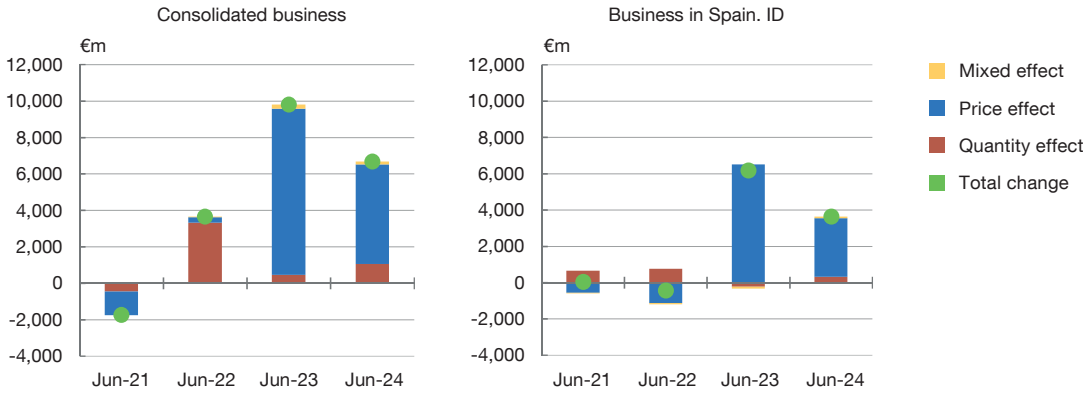
Net operating income rose by 17.3% in the 12 months to June 2024, driven by the growth in net interest income and other items, despite higher operating expenses. Other contributors to the increase in net operating income, in addition to the significant improvement in net interest income, were fee and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

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

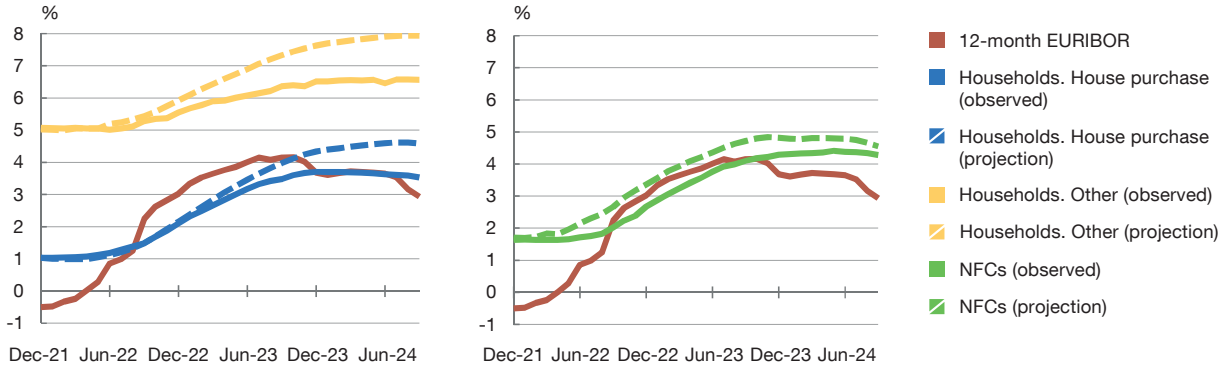
Chart 2.12

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

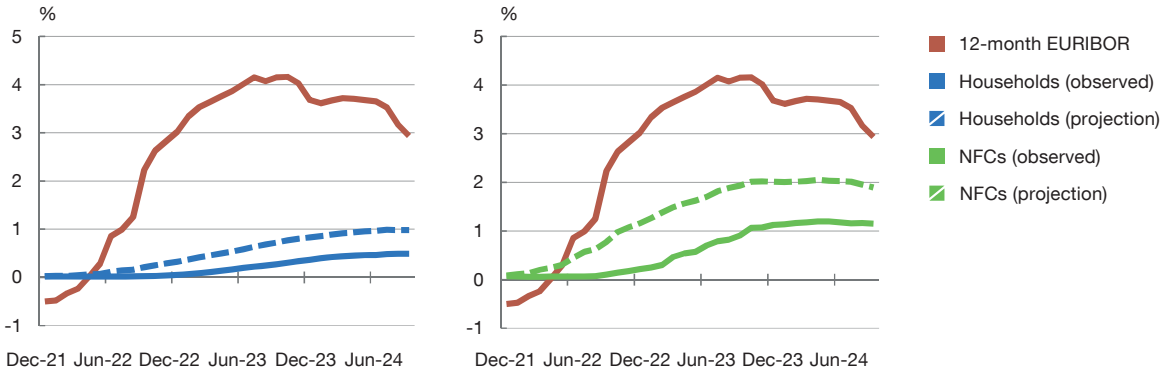
2.12.a Breakdown of the change in net interest income (a)



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



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



SOURCE: Banco de España.

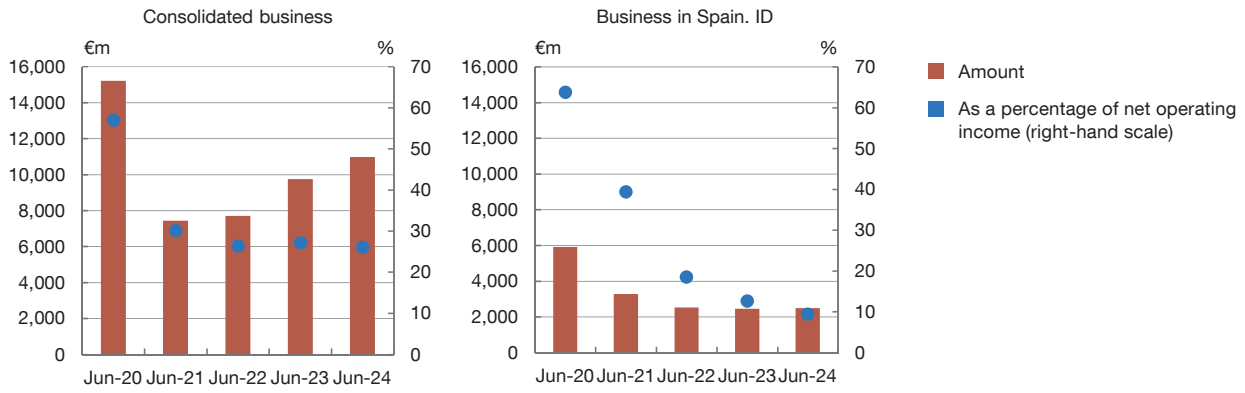
a The quantity effect is calculated as the product of the change in investments (in the case of income) or funding (in the case of expenses) and the return (income) or cost (expenses) held constant at the values of the initial period. The price effect is calculated as the product of the change in return (income) or cost (expenses) and the investments (income) or funding (expenses) held constant at the values of the initial period. The mixed effect is a residual calculated as the difference between the total change and the sum of the price and quantity effects. The effects on net interest income are calculated as the difference between the effects on interest income and interest expense.

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

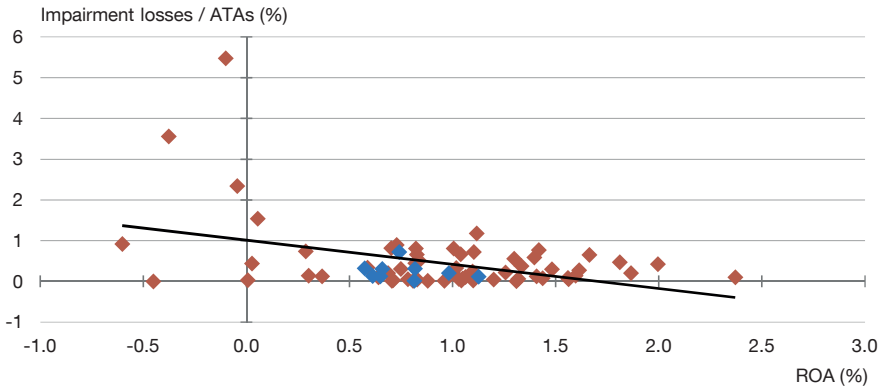
Chart 2.13

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

2.13.a Impairment losses



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



SOURCE: Banco de España.

a Significant institutions are shown in blue.

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

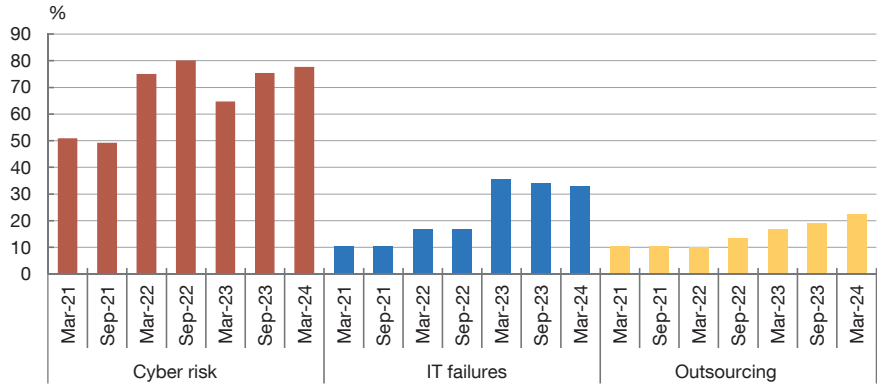
Impairment losses increased in 2024 H1, but their share in net operating income did not. Thus, they saw year-on-year growth both at the consolidated level (12.6%) and in Spain (1.5%). However, as a share of net operating income they remained stable at the consolidated level (close to 26%, see Chart 2.13.a)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

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

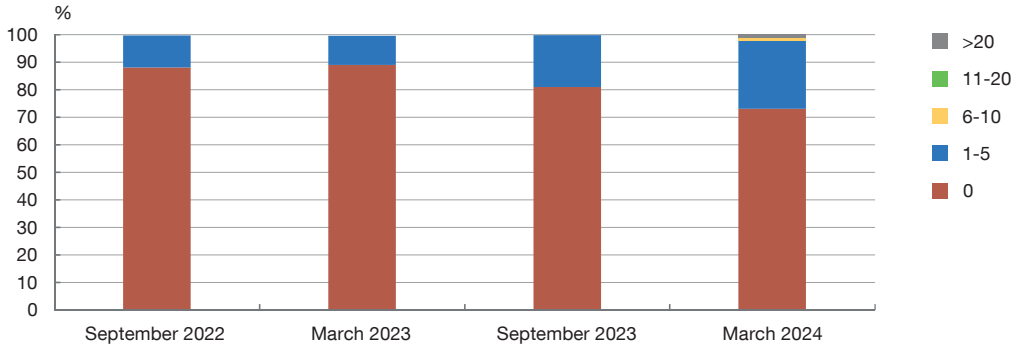
Chart 2.14

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

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



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



SOURCE: EBA.

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

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

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

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

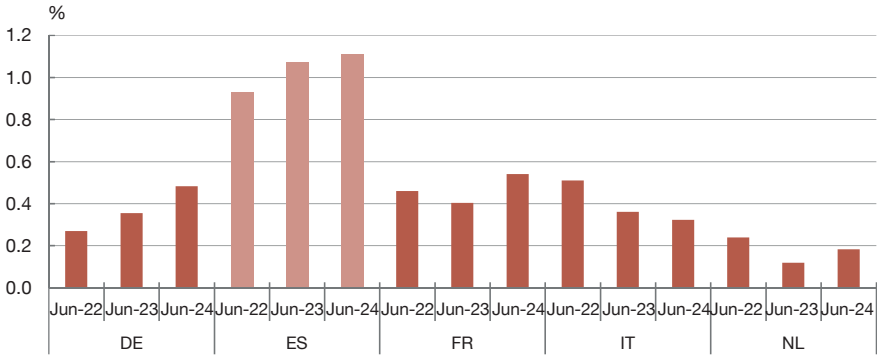
stolen information lacked immediate transactional relevance, and this limited the direct impact of this incident.

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

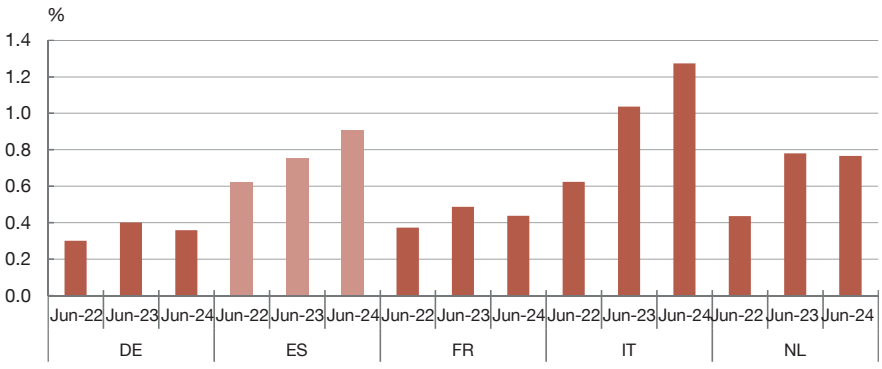
Chart 2.15

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

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



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



SOURCE: EBA.

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

11 See SSM press release.

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

Solvency

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

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

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

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

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

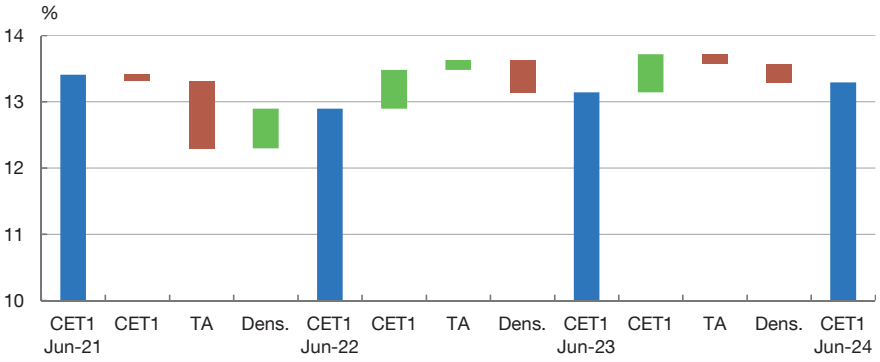
13 The Spanish banking system's CET1 ratio used in Chart 2.16.a differs from that used in Chart 2.16.b, as the latter figure (reported by the EBA) considers only the ten largest Spanish banks.

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

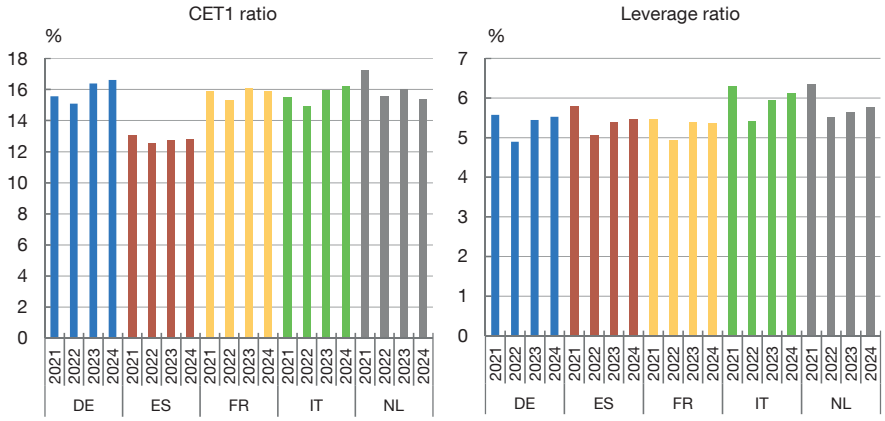
Chart 2.16

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

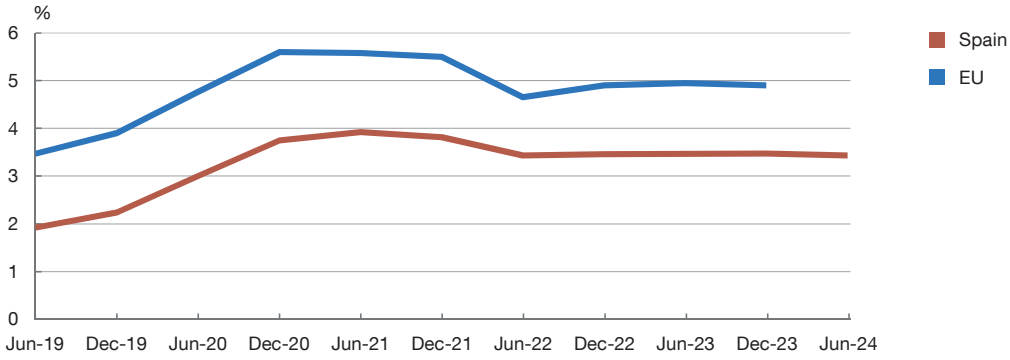
2.16.a Breakdown of the change in the CET1 ratio between 2021 and 2024 (a). Consolidated data



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



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



SOURCES: EBA and Banco de España.

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

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

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

2.2 Non-bank financial sector and systemic interconnections

2.2.1 Non-bank financial sector

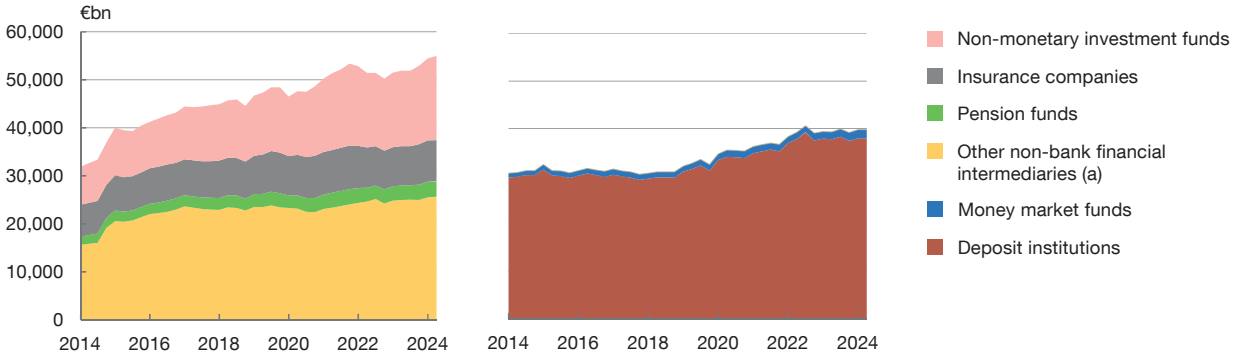
Overall non-bank financial sector developments

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

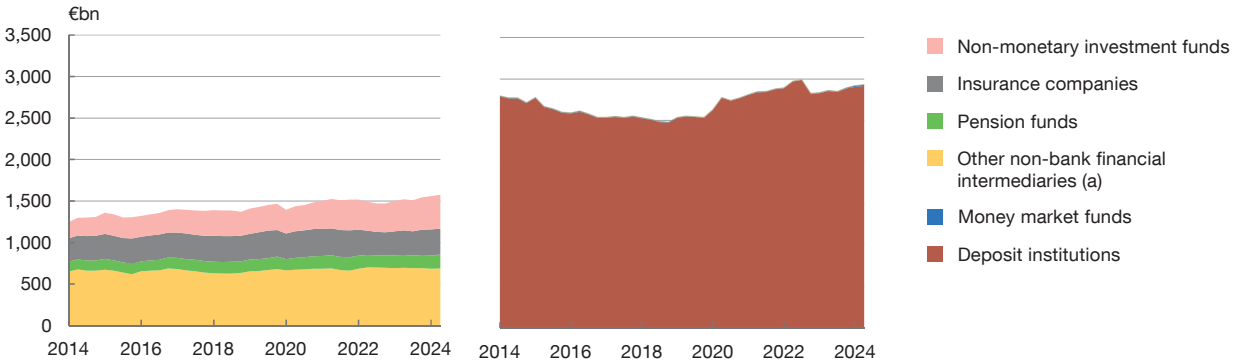
Chart 2.17

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

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



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



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

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

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

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

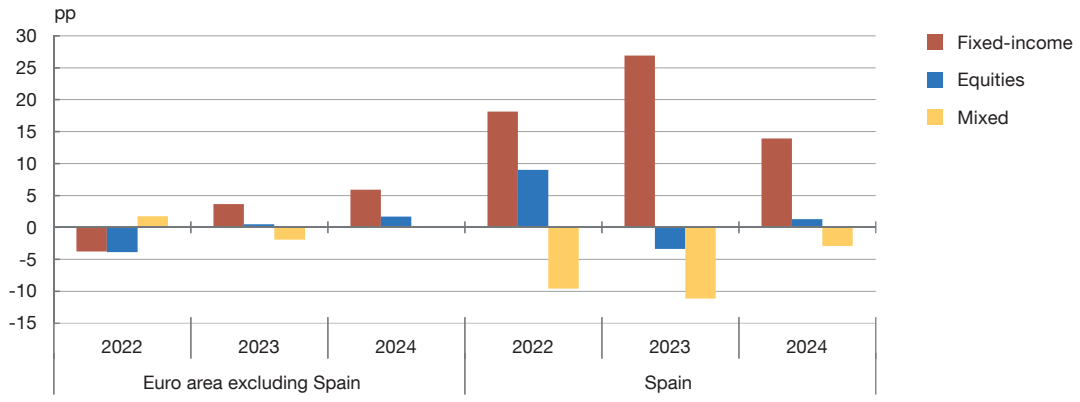
Investment funds

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

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

Chart 2.18
Capital inflows to fixed-income funds remained strong throughout 2024, particularly in Spain

2.18.a Investment fund flows (a)



SOURCE: European Central Bank (Investment fund statistics).

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

Pension funds

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

Specialised lending institutions

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

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

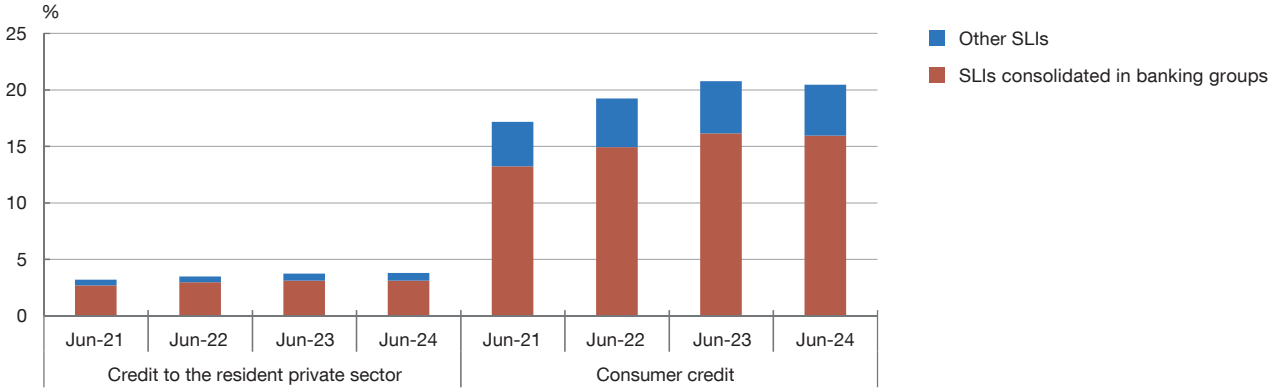
The sharp slowdown in the growth of consumer lending by SLIs contributed to their loss of share in this segment. In June 2024 consumer credit from SLIs increased by 3.7% year-on-year, down 6.5 pp on a year earlier (see Chart 2.19.b, left-hand panel), whereas in the case of deposit institutions, it grew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

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

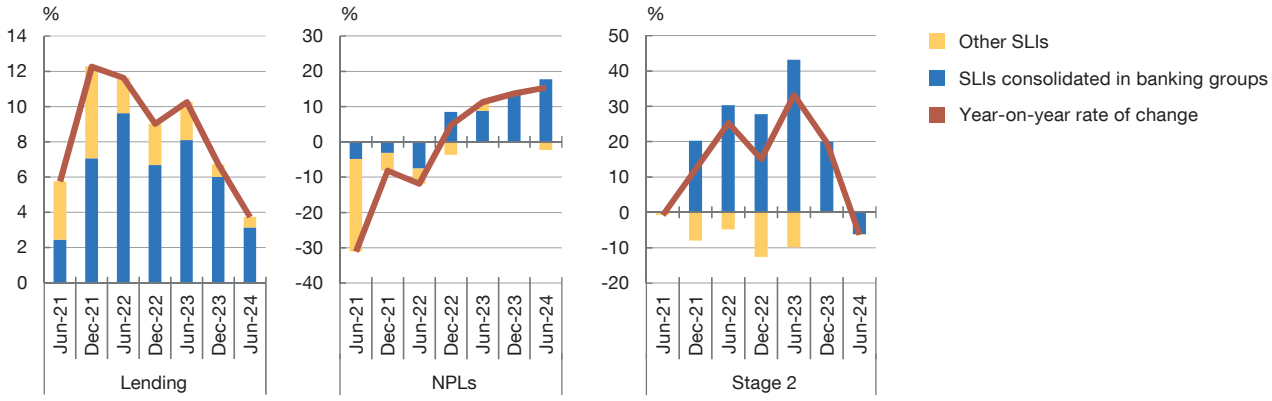
Chart 2.19

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

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



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



SOURCE: Banco de España.

2.2.2 Systemic interconnections

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

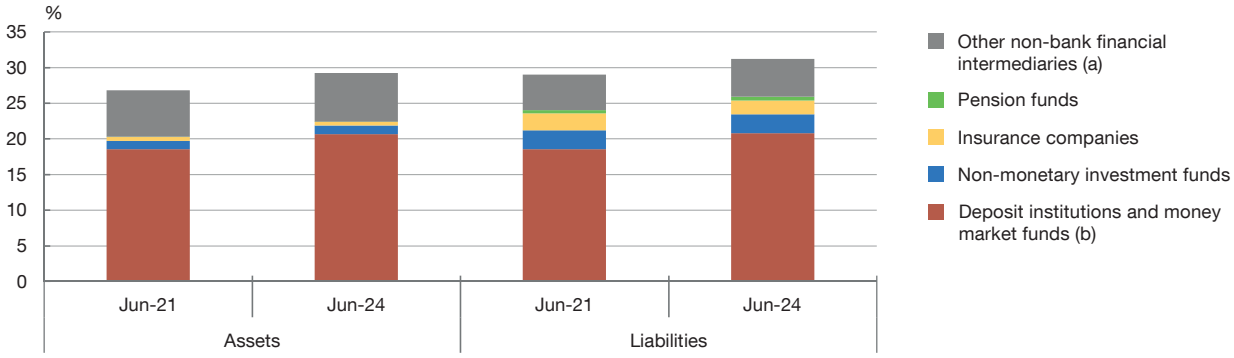
15 Direct interconnections refer to the cross-holdings of assets and liabilities between the different financial sectors.

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

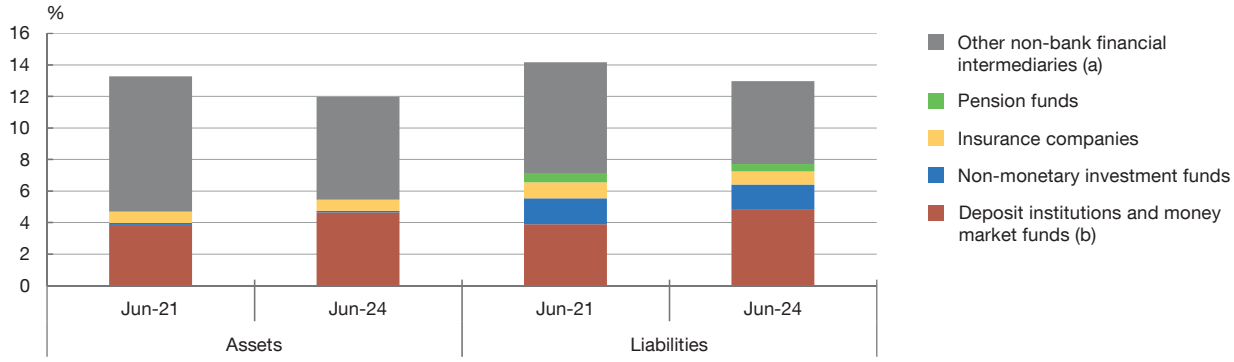
Chart 2.20

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

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



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



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

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

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

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

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

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

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

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

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

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

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

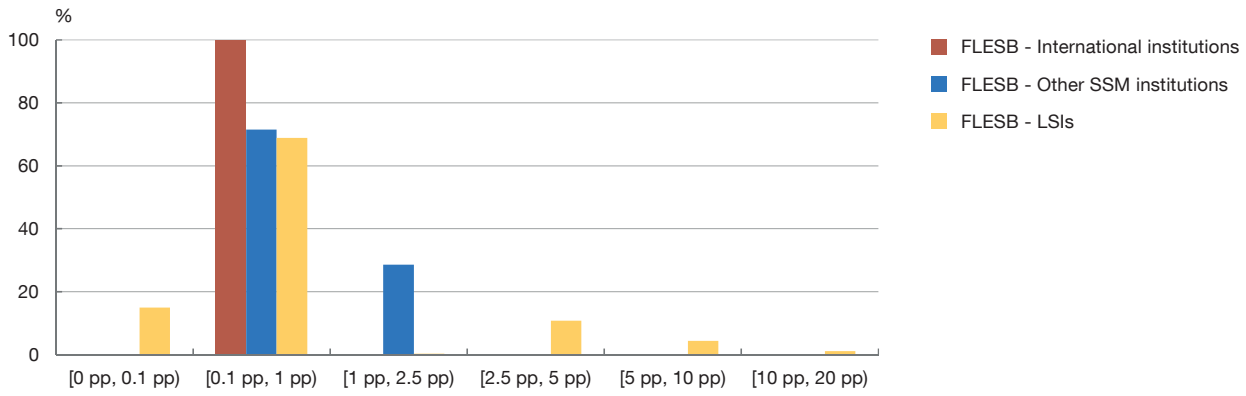
20 In 2024 Q2 the total assets of the FLESB - International institutions, FLESB - Other SSM institutions and FLESB - LSIs groups were €1,436 billion, €1,041 billion and €177 billion, respectively. Interbank market tensions would also have an impact on other institutions not included in these groups,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

21 See Chart 2.25 of the Spring 2024 Financial Stability Report

Chart 2.21

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

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



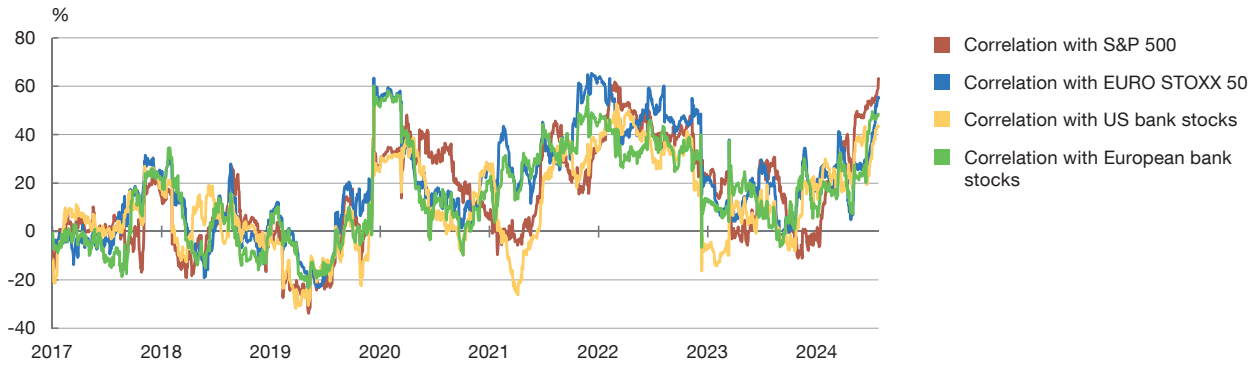
SOURCE: Banco de España.

a The impacts depicted are due solely to contagion through the interbank exposure network and would occur in addition to the direct impact of the initial shock to some system institutions. As an initial shock, a capital consumption is applied to each institution included in the FLESB stress test described in Box 2.1 equivalent to the average of the sub-sample to which it belongs: significant institutions with the most international activity (International institutions), other significant institutions directly supervised by the SSM (Other SSM institutions) and a group of less significant institutions under the direct supervision of the Banco de España (LSIs). The average capital consumption is for the scenario's entire projection horizon (2024-2026). Contagion was simulated using the DebtRank model (see Battiston, Puliga, Kaushik, Tasca and Caldarelli, 2014, and Carro and Stupariu, 2024).
b In 2024 Q2 the total assets of the FLESB - International institutions, FLESB - Other SSM institutions and FLESB - LSIs groups were €1,436 billion, €1,041 billion and €177 billion, respectively.

Chart 2.22

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

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



SOURCES: LSEG and MVIS Investable Indices

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

between the daily returns of a crypto-asset index and of various stock market indices (including the US and European stock market indices and banking sub-indices) has found these correlations to be positive. This has particularly been the case since the COVID-19 health crisis, with correlations reaching an all-time high in 2022 and returning to near-peak levels in 2024

(see Chart 2.22). Investors in crypto-assets are therefore exposed to downward corrections to their value when there are tensions in the broader financial markets, associated with equity market downturns.

Box 2.1

FORWARD-LOOKING ASSESSMENT OF THE SPANISH BANKING SYSTEM'S RESILIENCE

This box presents the main results of the Banco de España's exercise to measure the Spanish banking system's resilience to the materialisation of systemic risks to the macro-financial environment over the 2024-2026 horizon. The exercise was carried out using the Forward Looking Exercise on Spanish Banks (FLESB) methodological framework,[1] assessing the banking system's solvency under various macro-financial scenarios. To be specific, three scenarios were considered: a baseline scenario and an adverse one, whose narrative and impacts are both in line with those used for the EU-wide stress test coordinated by the European Banking Authority (EBA) in 2023,[2] and an intermediate scenario designed by the Banco de España.

As on previous occasions, the exercise uses the dynamic balance sheet assumption,[3] so the size of banks' balance sheets is also projected based on macroeconomic scenarios.[4]

This box focuses on the impact on the banking system's solvency, although liquidity has also been analysed, and its results did not point to signs of tension in the banking sector or any significant change against the previous exercise.[5]

Description of the scenarios

The baseline scenario is in line with the economic forecasts made at end-2023 and assumes average GDP growth of 1.7% over the period 2024-26. Annual inflation is expected to stand at an average of 2.4% over the exercise horizon, while the 12-month EURIBOR and the yield on 10-year government bonds are expected to stabilise at 3.1% and 4.2%, respectively (see Charts 1 and 2).

The intermediate scenario portrays an environment in which inflation picks up above the baseline scenario (4.1% on average), mainly owing to increases in energy and food prices. This leads to a tightening of monetary policy, with higher interest rates towards the end of the projection period. Specifically, interest rates are also higher than under the baseline scenario, with the average 12-month EURIBOR at 4.8% and the yield on 10-year government bonds averaging 5.0%. Under this scenario, economic growth is more moderate, averaging 0.5% between 2024 and 2026.

The adverse scenario envisages a situation of stagflation stemming from a worsening of geopolitical tensions and global value chain disruptions accompanied by a significant deterioration in macro-financial conditions. Under this scenario, GDP is projected to contract by an average of 2.1% over the projection horizon. Inflation would reach an average of 3.4%. Interest rates increase significantly, with the 12-month EURIBOR rate rising to an average level of 4.3% and the yield on 10-year government bonds averaging 7.3%, owing to the increase in risk premia.

Regarding house prices, the baseline scenario forecasts an average increase of 2.4%, while the intermediate scenario envisages more moderate growth of 2.2% (see Chart 2). Under the adverse scenario, house prices fall by an annual average of 6.1%. Stock market valuations, which are stable under the baseline scenario, fall by 7.5% and 10.1% in annual average terms under the intermediate and adverse scenarios, respectively.

As in previous exercises, the uneven impacts of the scenarios on different sectors are taken into account. In the intermediate scenario, the hospitality and recreation sectors are the hardest hit, along with the sectors that require most energy and other commodities. Under the intermediate scenario, the average annual decline for these sectors ranges from 1.5% to 2.3%. Under the adverse scenario, the negative impact is concentrated on

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1 The FLESB is a top-down methodology. In other words, it applies the same scenarios, assumptions and models consistently across all of the banks analysed. The data sources available are highly granular, reaching down to the level of individual transactions and foreclosed assets in business in Spain. Business abroad is also modelled, with less granular data. The methodological framework is developed in-house by the Banco de España. The main features of this framework are outlined in the November 2013 Financial Stability Report (FSR). Over the succeeding years, the FSR has described the main improvements and new developments included in the model, since it is a dynamic framework under continuous development.

2 These scenarios are the most relevant for supervisory purposes. In this update, the baseline scenario for Spain and the other countries relevant to Spanish banks are in line with the December 2023 Eurosystem staff Broad Macroeconomic Projection Exercise, while the adverse scenario continues with the stagflation narrative and the high level of severity of the shocks employed in the 2023 EU-wide stress test's adverse scenario.

3 The dynamic balance sheet assumption is applied in the FLESB so that banks' loan portfolios are affected by the macroeconomic scenario's credit growth. This leads to higher or lower amounts of non-performing loans that affect banks' revenue and changes the risk-weighted assets (RWAs).

4 Under the scenarios in which activity contracts, falls are also projected in lending to the non-financial private sector in different portfolios (households and firms) and different countries.

5 See Box 2.2 of the Autumn 2023 FSR.

Chart 1
Macroeconomic impact. Spain (a)

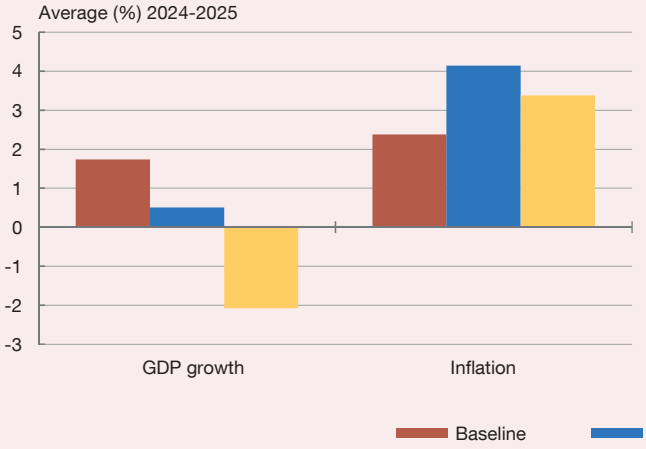
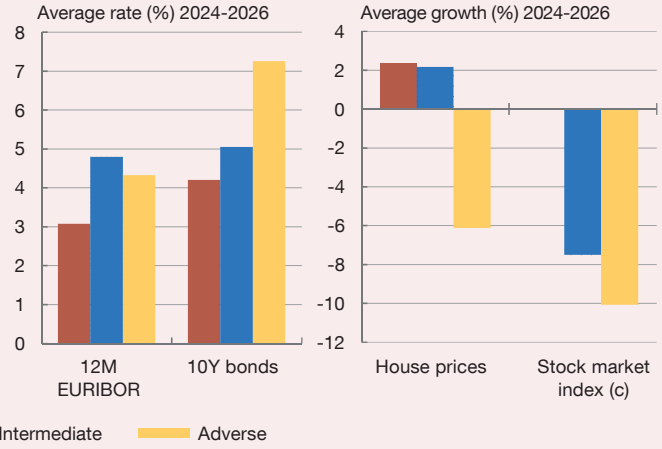
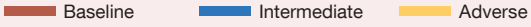


Chart 2
Impact on markets in Spain (b)





SOURCE: Banco de España.

a Inflation is calculated using the harmonised index of consumer prices (HICP).
b Changes in the valuations of equities are calculated drawing on the Madrid Stock Market General Index.
c Average stock market index growth under the baseline scenario is zero.

these latter sectors to a greater extent, with an average annual fall over the projection horizon in real gross value added of 9.4% for the aggregate of the most energy-intensive industries.

Lastly, these scenarios are applied not only to Spain, but also to those countries to which Spanish banks are significantly exposed (see Chart 3), following a narrative comparable to that applied in Spain. Under the intermediate scenario, the impact on international activity is contained, with low average growth rates from 2024 to 2026, but no falls are projected (the lowest growth countries would be Brazil, at 0.6%, and the United Kingdom, at 0.7%). The adverse scenario envisages sharper contractions in GDP, particularly in the United Kingdom, with an average decline of 2.5%, and Türkiye, with an average drop of 2.4%.

Inflation would follow the same dynamics as under the scenarios for Spain. Under the intermediate (adverse) scenario, it is highest in Brazil at 6.7% (4.9%) and Mexico at 5.1% (4.6%), excepting the exceptionally high values envisaged in Türkiye, which stand around 57% under both scenarios. Chart 4 shows average short and long-term rates under these international scenarios, with levels standing particularly high in those countries with higher inflation, such as Brazil, Mexico and, most notably, Türkiye.

Aggregate results of the exercise

This section presents the results of the stress test, in terms of the CET1 ratio, broken down by groups of banks. First, it focuses on the significant institutions (SIs) supervised by the ECB within the framework of the Single Supervisory Mechanism (SSM), which are further divided into those with the most significant international activity[6] (the "International group") and other banks under the direct supervision of the ECB (the "Other SSM group"). A third group comprises smaller banks supervised directly by the Banco de España that have no significant international activity (the less significant institutions group, "LSI group").

Chart 5 shows the different developments in the aggregate CET1 ratio between 2023 (starting point) and 2026 (end of the horizon) under each of the three scenarios, distinguishing between these groups of institutions. The initial CET1 ratio of the International group was 12.5% in 2023, which rises to 14.7% and 13.3% under the baseline and intermediate scenarios, respectively, while the adverse scenario envisages a fall to 10.2%.

6 The International group includes the three in which such activity is most important and longest-running.

Chart 3
Distribution by country of real GDP growth and inflation under baseline, intermediate and adverse scenarios.
Average for 2024-2026 (a) (b)

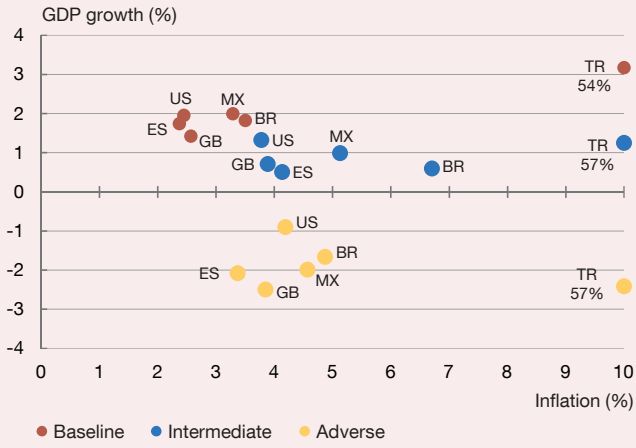
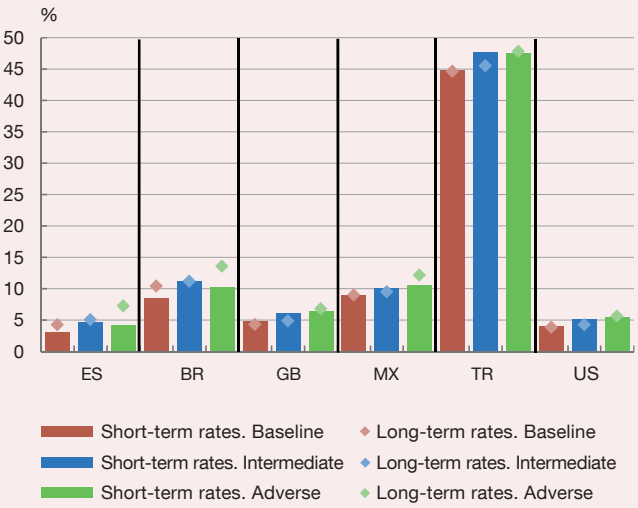


Chart 4
Average short and long-term rates by country in 2024-2026 under the baseline, intermediate and adverse scenarios



SOURCE: Banco de España.

a The range of the horizontal axis has been limited owing to the extreme values of inflation in Türkiye (an average of 54% under the baseline scenario and 57% under the intermediate and adverse scenarios).
b Inflation is calculated using the HICP.

The Other SSM group began with a slightly higher CET1 ratio, at 13.1% in 2023. Under the baseline and intermediate scenarios this increases to 14.6% and 13.3%, respectively, while it falls to 8.9% under the adverse scenario. This latter figure represents the lowest of any of the groups of banks, in spite of the ratio starting above that of the International group.

Lastly, LSIs have higher CET1 ratios, standing at 20.2% at the outset of the exercise and increasing over the exercise horizon under the baseline, intermediate and adverse scenarios to 24.5%, 24.1% and 21.0%, respectively.

These results reflect the strong aggregate resilience of the Spanish banking sector under these scenarios, together displaying sound solvency, even in a macro-financial environment that is as negative as that envisaged by the adverse scenario. However, as mentioned above, the impacts differ across bank groups.

The main factors that determine the change in the CET1 ratio are broken down for each scenario in Chart 6,[7] with their weight expressed as a fraction of RWAs.

The International group shows capital growth, mainly on the back of earnings from net operating income and net income abroad, under the baseline and intermediate scenarios. In the adverse scenario, banks' capacity to generate capital is affected and, while the use of provisions makes a positive contribution, it fails to offset the negative impact of asset impairment and sovereign exposure. A closer look at this latter scenario reveals that capital generation is cut significantly (4.1% of RWAs) and, in conjunction with the use of provisions (1.3% of RWAs), is

7 The chart shows the effects of the estimated losses, specifically the impairment losses on loans and foreclosed assets of business in Spain and the impact on capital of a potential deterioration of sovereign exposures at the consolidated level. It also shows the impact of the scenarios on loss-absorbing items, namely the use of existing provisions and capital generation through net operating income in Spain and net profit/loss of foreign operations. Both the losses and the loss-absorbing items are presented as a percentage of the RWAs existing at December 2023. The other impacts are also shown, which cover other items that affect CET1 capital (the numerator of the solvency ratio) such as other gains or losses and tax effects, and the change in RWAs (the denominator of the solvency ratio).

Chart 5
CET1 ratio observed in 2023 and results in 2026 of the baseline, intermediate and adverse scenarios

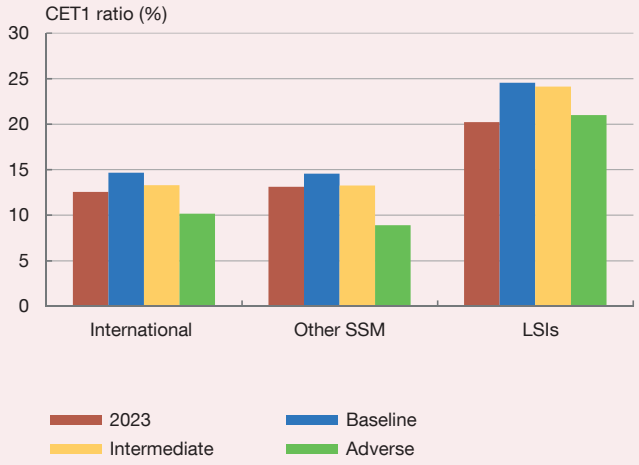
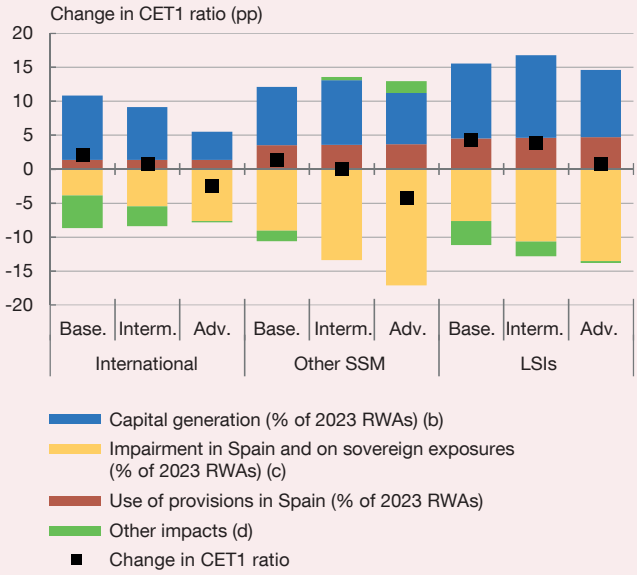


Chart 6
Impact of risk materialisation scenarios on bank solvency (a)



SOURCE: Banco de España.

a The impacts are defined as the expected changes in the CET1 ratio in 2026 and in different financial flows in 2024-2026 (e.g. capital generation) stemming from the materialisation of adverse changes in the macro-financial conditions envisaged in the scenarios in this box.
b The generation of loss-absorbing capital is determined by net operating income in Spain and by the net profit/loss generated abroad for banks with significant international activity.
c Impairment losses on loans and foreclosed assets in operations in Spain and impact on capital of the potential impairment of sovereign exposures at consolidated level.
d Other consolidated gains and losses, tax effects, exchange rate effects, distribution of profit, coverage of losses on ICO-backed loans by the Government and changes in RWAs.

not enough to offset the losses arising from impairment (-7.7% of RWAs) and other impacts (-0.2% of RWAs).

The Other SSM group also shows positive performance under the baseline and intermediate scenarios, mainly owing to capital generation and the use of provisions. However, loss-absorbing capacity is constrained under the adverse scenario. Thus, under this scenario, capital generation (7.6% of RWAs), the use of provisions (3.6% of RWAs) and other impacts (1.7% of RWAs) are not sufficient to offset heavy impairment losses (-17.2% of RWAs), resulting in the CET1 ratio falling by slightly more than 4 pp.

The last group of banks, the LSI group, sees an increase in their CET1 ratios in all scenarios, owing to their ability to generate capital and the use of provisions, which are enough to offset asset impairment. Under the adverse scenario, the generation of new loss-absorbing capital (9.9% of RWAs) and the use of provisions (4.7% of RWAs) more than offset impairment losses (-13.6% of RWAs) and other impacts (-0.3% of RWAs).

Compared with the 2023 FLESB, the initial CET1 ratio was higher for all groups of banks (up 0.2 pp for the International group and the Other SSM group, and 2 pp for the LSI group). In addition, the CET1 ratios at the end of the horizon are also higher, above both the results of the baseline scenarios of both exercises and the adverse scenarios that follow the same narrative. The 2024 intermediate scenario is not analysed because its assumptions cannot be compared to those of the 2023 adverse scenario.

Under the baseline scenario, there are increases in the CET1 ratio at the end of the horizon with respect to the 2023 exercise of 1.2 pp for the International group, 0.5 pp for the Other SSM group and 3.1 pp for the LSI group. Under the adverse scenario the CET1 ratios are 0.7 pp higher for both the International and Other SSM groups and 3.7 pp higher for the LSI group.

The factors that explain this improvement, aside from the increase in the starting CET1 ratios (very high for the LSI group), include greater capital generation (especially funds deriving from positions abroad for the International group and from net interest income for the LSI group) and slightly lower losses, in both credit and sovereign holdings (with a notable decrease in the credit loss of the Other SSM group).

Starting from a higher level of interest rates than in the previous exercise contributes to the generation of income in all years of the horizon, particularly under the baseline scenario. The update of the financial information relating to business abroad, with a broadly positive recent performance, also helps to better estimate of earnings. The re-optimisation of sovereign debt portfolios by banks in 2023 in light of the new higher interest rate environment has resulted in lower sovereign debt losses.

As an additional exercise, results were also obtained for a more up-to-date baseline scenario based on the September 2024 macroeconomic projections. These projections envisage more positive developments in activity than were expected in winter 2023. In this setting, the banks' overall CET1 ratio at the end of the exercise would stand at 15.4%, 32 basis points (bp) higher than under the baseline scenario considered in the main exercise.

Analysis of the channels of impact

The main channel with a negative impact on Spanish banks' solvency is the increase in the provisions for credit portfolio impairment under both the intermediate and the adverse scenarios (see Chart 7).[8] The intermediate scenario shows an estimated increase in the median credit provisions in Spain of 3.3 pp of RWAs compared with the baseline scenario. Under the adverse scenario, the increase relative to the baseline scenario in the median credit impairment provisions is 6.1 pp of RWAs (in the 2023 exercise it was higher, 7.4 pp).

As in previous exercises, a valuation haircut was applied to Spanish banks' sovereign bond portfolios owing to the significant interest rate hike in both the intermediate and the adverse scenarios (see Chart 7). The differential losses relative to the baseline scenario amounted to 0.1 pp of RWAs in the intermediate scenario and 0.6 pp in the adverse scenario (the same as under the adverse scenario in the 2023 exercise).

These haircuts are not homogeneous across banks, as those with more sovereign debt holdings accounted for at fair value would incur more significant losses under these scenarios.[9] Spanish banks' sovereign debt fair value exposure is in line with that of the previous exercise, declining by only 0.2 pp (30.8% at December 2023, compared with 31% observed a year earlier). These losses are also affected by the share of holdings of instruments with longer maturities and of sovereign bonds from countries facing higher haircuts on their government debt due to their macro-financial situation.

Lastly, the increase in net interest income is another important impact channel whose effect has diminished relative to last year. On this occasion, the initial interest rates are substantially higher and closer to those included in the scenarios, meaning that the changes in spreads are smaller. Under the intermediate scenario, growth in net interest income is 1.2 pp of RWAs in median terms relative to the baseline scenario (see Chart 7). Under the adverse scenario, this impact is practically zero, unlike the previous year, when an increase of 0.65 pp was posted. The results are also uneven across institutions, depending on the composition of their assets and their profitability in relation to the structure and cost of liabilities.

Sensitivity analysis

Under the framework of the FLESB tool, several sensitivity analyses in addition to those of the main exercise have been conducted, as in prior years.

First, the impact of the ICO guarantee scheme, which was initiated to mitigate the effects of the COVID-19 pandemic on firms,[10] was analysed. Given the uncertainty about the

8 The loan portfolio represents 62.5% of the sample banks' exposure in Spain. Within operations in Spain as a whole, loans to firms and households account for 45.1% and 54.9%, respectively.

9 Various bank investment portfolios are classified at fair value, and the value of such assets is recognised based on their realisable market value. This is done on the understanding that, as part of its investment strategy, the bank may sell these assets before maturity. Conversely, assets expected to be held to maturity, for example with the purpose of collecting interest payments, are measured at amortised cost, and their value reflects the unamortised unimpaired portion of their nominal amount.

10 The guarantee scheme reduces impairment losses on business lending, which has a positive effect on bank solvency.

Chart 7
Distribution among banks of impacts (relative to 2023 RWAs) of the intermediate and adverse scenarios on financial impairment provisions, sovereign losses and the interest margin (a). SIs

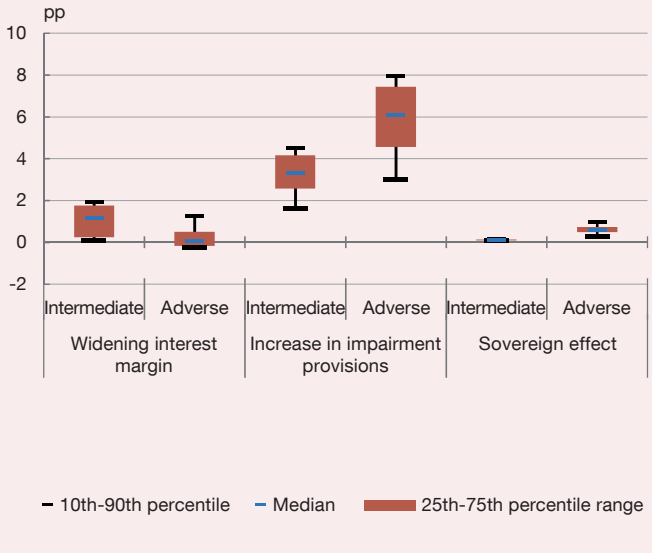


Chart 8
Effect of ICO-guarantee scheme (b) (c)

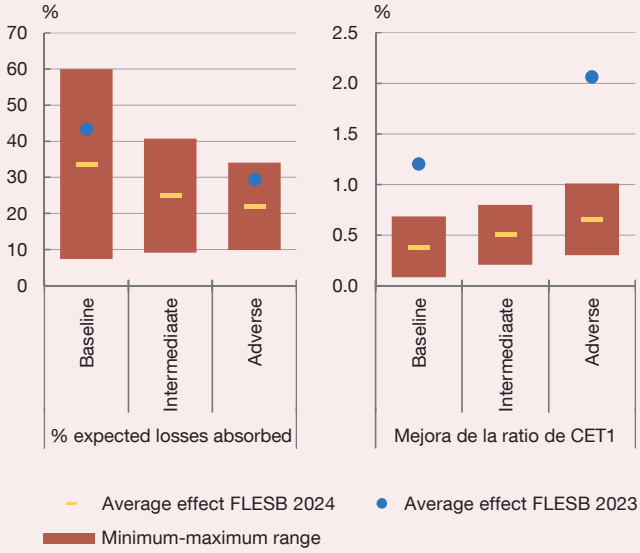
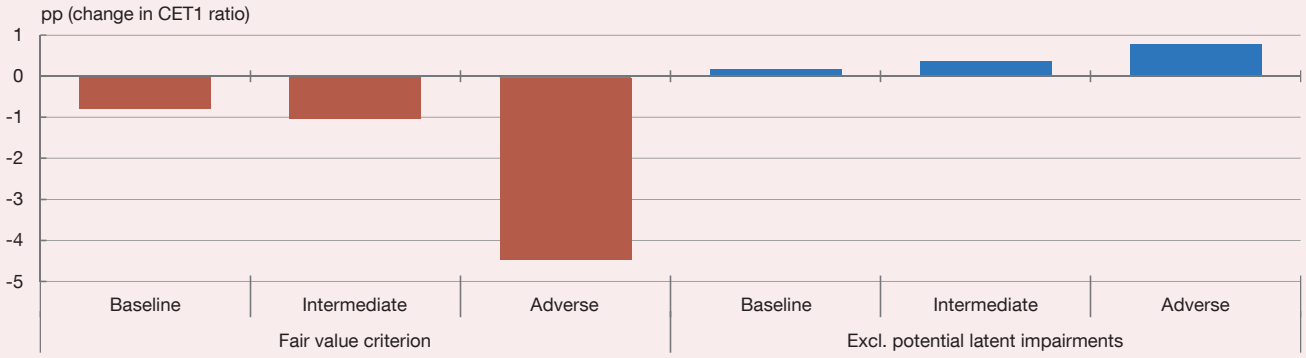


Chart 9
Sensitivities to other modelling assumptions (d)



SOURCE: Banco de España.

a Shown is the distribution among banks of the differences between the intermediate and adverse scenarios compared with the baseline scenario in earnings due to the widening of the net interest margin in operations in Spain, in losses due to the higher provisions in operations in Spain and in the effect of sovereign exposures in consolidated operations. These measures are cumulative in the horizon 2024-2026 relative to 2023 RWAs for the baseline and adverse scenarios, and the institutions considered are SIs. The bars represent the values between the 25th and 75th percentiles, while the lines show the 10th, 50th (median) and 90th percentiles.

b Shown is the range of the measure's impact on the expected loss of the corporates portfolio (left-hand panel) and on the CET1 ratio (right-hand panel), depending on the assumptions regarding the credit quality of loans extended to firms and sole proprietors in Spain under the ICO guarantee scheme. The minimum effect assumes that the expected loss is equal to the average of the corporate lending portfolio, while the maximum effect assumes that NPL inflows are primarily concentrated among guaranteed loans. The red line denotes the mid-range effect.

c The main analysis (the results of which are set out in Charts 6 and 7 of this box) incorporates an intermediate assumption about the effect of the guarantee scheme.

d Shown are the differences in the average CET1 capital ratios of SIs and LSIs projected for 2026 in the sensitivity exercises compared with those projected in the main solvency exercise. The sensitivity exercises consider the following impacts: i) the effect of reclassifying all sovereign bond exposures at fair value, and ii)the effect of excluding from the exercise the impact of potential latent losses accumulated during the period 2020-2023 in the corporate credit portfolio as a result of the extraordinary crises that arose in this period.

credit quality of the guaranteed loans and their performance, this effect is estimated considering a range of assumptions[11] (see Chart 8). Under these assumptions, ICO-backed exposures have a higher probability of default (in varying degrees) than other firms.

Considering an average point in the range of assumptions on the differential quality of ICO loans, the percentage of loss assumed by these guarantees under the baseline scenario would be 33.6%. This is lower than the 43.5% estimated under this assumption in 2023 mainly due to a reduction of the guaranteed portfolio. The percentage of loss covered by the guarantees is 24.9% under the intermediate scenario and 21.9% under the adverse scenario, both below the 29.5% estimated last year for the adverse scenario. By absorbing part of the losses, the scheme appears to positively contribute to bank solvency, increasing the CET1 ratio by 0.4% under the baseline scenario (1.2% in 2023), by 0.5% under the intermediate scenario and by 0.7% under the adverse one (2.1% in 2023). If the probability of default on the ICO portfolio were the same as for other firms, less capital than that included in the main exercise would be saved, declining to a CET1 increase of declining to a CET1 increase of 0.1%, 0.2% and 0.3% under the baseline, intermediate and adverse scenarios, respectively.

The lower impact of the ICO guarantees estimated in the sensitivity exercise is consistent with the gradual reduction in the size of this portfolio and with the progressive fading of the latent credit impairment associated with the COVID-19 health crisis, which is in the increasingly distant past.

Second, an analysis has been conducted of the sensitivity of sovereign bond portfolio losses in value based on the assumption used for its accounting classification (see Chart 9). In particular, the recognition of all sovereign exposures at fair value would increase losses associated with interest rate hikes under the adverse scenario. The CET1 ratio would thus be 0.78 pp lower under the baseline scenario (compared with 1.71 pp in 2023), 1.02 pp under the intermediate scenario and 4.41 pp under the adverse scenario (compared with 5.54 pp in 2023).

It is important to note that it is highly unlikely for banks to materialise all the latent loss under a given scenario. This is because they have mechanisms to cover such losses and other options to obtain liquidity (excess reserves, sale of assets originally classified at fair value, central bank liquidity lines, etc.) and they can therefore avoid reclassifying at fair value their exposures at amortised cost. However, the outcome of this sensitivity analysis indicates some degree of vulnerability of the banking sector in scenarios where it would have to sell a significant fraction of these sovereign debt holdings classified at amortised cost.

Lastly, estimates have been made eliminating the effect of potential latent impairments[12] arising from the COVID-19 crisis (see Chart 9). These effects are lower than in previous exercises, with the CET1 ratio increasing by 0.16 pp, 0.37 pp and 0.76 pp under the baseline, intermediate and adverse scenarios, respectively. As noted earlier, as we move away from the 2020 health crisis, these effects gradually fade within the framework assumptions, as the exposures more closely linked to this episode (e.g. ICO-backed exposures) are progressively amortised and it is possible to determine whether defaults have materialised on them over a longer time frame.

Conclusions

This exercise shows that Spanish banks' aggregate solvency levels would remain satisfactory under the scenarios considered, the severity of which is high in the case of the adverse scenario. The impact in terms of capital consumption would be significant, but both initial capital levels and banks' capacity to generate capital and absorb losses would underpin the banking sector's overall resilience.

However, although the results of the exercise are positive, there are some caveats. These are in part associated with

11 The bottom end of the range assumes that the expected loss on guaranteed loans is equal to the average for the corporate credit portfolio; the top end assumes that the guaranteed loans are concentrated among riskier debtors. The previous section's findings are based on the impact of the ICO guarantees at the midpoint of this range.

12 From the COVID-19 pandemic, the estimates of the main exercise take into account additional credit risk shocks based on impairment that did not materialise in 2020 thanks to the economic policy measures adopted. In subsequent years, the estimation of these latent impairments is reduced by two factors: (i) the possibility of some of these risks having already materialised is considered (their amount is reduced on the basis of the downward forecast errors in the probabilities of default in 2021, 2022 and 2023), and (ii) a downward adjustment is made based on the pace of repayment of ICO-backed loans, which is indicative of the reduction in debt taken on to meet extraordinary liquidity needs in 2020.

the uncertainty inherent to these exercises and, as the results are presented in aggregate form, with the existing heterogeneity across banks. The sector's positioning should be prudent when considering provisioning and capital plans and should be accompanied by macro- and microprudential authorities' oversight. Thus, a framework is in place that helps absorb potential unexpected losses deriving from the materialisation of systemic risks.

3

SYSTEMIC RISK AND PRUDENTIAL POLICY

The values of the main indicators used in the new framework for setting the countercyclical capital buffer (CCyB) are consistent with an intermediate level of cyclical systemic risk. However, the coincident indicators of stress in financial markets remain abnormally low, indicating overoptimism, with August's turbulence having proved very short-lived.

The standard credit cycle indicators, such as the credit-to-GDP gap, are still showing some signs of weakness, although they are no longer declining and appear to be gathering momentum. Other indicators, such as those linked to real activity (output gap) and to the banking sector's capital generation capacity (profitability and stock market valuation), are displaying a more expansionary cyclical behaviour and are following an upward path.

According to the Banco de España's revised framework for setting the CCyB, this situation is consistent with holding the required buffer rate for exposures located in Spain at 0.5% (where it has been since early October), which will be binding as from 2025 Q4. If cyclical systemic risk remains at an intermediate level, in 2025 Q4 the buffer rate will also be increased to the 1% target level established in the new Banco de España framework.

Turning to the real estate sector, the growth path of house prices is a key factor to monitor. The sound performance of household income has so far prevented the emergence of signs of growing house price imbalances, but this could change in the coming quarters. In this regard, the credit standards based on borrower income and collateral value are not showing significant signs of easing compared with their historical distribution, despite a slight rise in the loan-to-value (LTV) ratio. However, interest rate spreads in the mortgage market are at historically low levels and mortgage loan maturities are lengthening slightly.

Notable recent regulatory and supervisory developments include the headway made to complete the transposition of the latest Basel III reforms in various jurisdictions. In the United States, the implementation is set to be less ambitious than the initial proposal, which was, however, more stringent than the minimum standards agreed by the Basel Committee on Banking Supervision (BCBS) and included banks that are not internationally active. Europe has decided to delay the application of some aspects – related to the treatment of market risk – of this reform, but others will be phased in between 2025 and 2030. In the United Kingdom, adoption of the framework is postponed to January 2026, with a transitional period for its implementation ending in 2030. On a separate note, the European Commission has launched a public consultation on macroprudential policies for non-bank financial intermediation (NBFI).

3.1 Analysis of risk indicators and systemic vulnerabilities

In 2024 Q4 the Banco de España has implemented a new framework for monitoring cyclical systemic risks to inform CCyB decisions.[1] This new framework has two stages. First, the cyclical position of 16 key macroeconomic, financial and banking indicators in Spain are analysed. Each indicator has three distinct phases based on its current position relative to its historical distribution: low, intermediate or standard and high cyclical systemic risk. Second, this analysis is fleshed out with other quantitative and qualitative information, such as the voluntarily capital buffers available to banks and their ability to generate capital organically, which are discussed in Chapter 2 of this report.

Both the top-down analysis of the key indicators and the analysis of the main categories indicate that cyclical systemic risk is at a standard level. The key indicators have been grouped into four blocks: macroeconomic indicators,[2] macro-financial indicators,[3] financial market indicators[4] and banking system indicators.[5] These four cyclical systemic risk dimensions stood, at the latest available date, at an intermediate level (see Chart 3.1.a). In line with this result, the composite indicator, which aggregates data on all the indicators, is also currently at a standard level, just above the 50th percentile.

The output gap remains slightly positive. The macroeconomic indicators are the key indicator category with higher levels and also remain on an upward trajectory. Among these indicators, the continued positive performance of GDP growth and the output gap is noteworthy (see Chart 3.1.b).

The credit-to-GDP gap reversed its downward trend in 2024 Q1. The macro-financial indicators are the indicators at the lowest level within the standard range. Among the indicators in this category, the credit-to-GDP gap remains in negative territory, but it has been on an upward path since end-2023 which, as projected, would take it into positive territory by end-2025. In addition, were the credit-to-GDP gap to be calculated using bank lending only (i.e. excluding other forms of debt), it would already be positive, close to equilibrium. This shows that non-bank finance is contributing to the gap's negative level. The indicators used to monitor the sectoral credit cycles of households and non-financial corporations (NFCs) are not showing signs of imbalances either, although they are now on an upward path.[6] Meanwhile, the real estate sector indicators are proving more expansionary and the projections also suggest that they will perform favourably over the coming quarters.

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1 For further details on the new framework for setting the CCyB in Spain, see Revision of the framework for setting the countercyclical capital buffer in Spain and Ángel Estrada et al. (2024). "Analysis of cyclical systemic risks in Spain and of their mitigation through countercyclical bank capital requirements". Documentos Ocasionales, 2414, Banco de España.

2 Economic activity and labour market indicators.

3 Financial indicators, such as bank credit, and their interaction with macroeconomic variables.

4 This financial indicator is disaggregated from the rest owing to its particular usefulness for contemporaneously measuring the materialisation of risks in the financial markets.

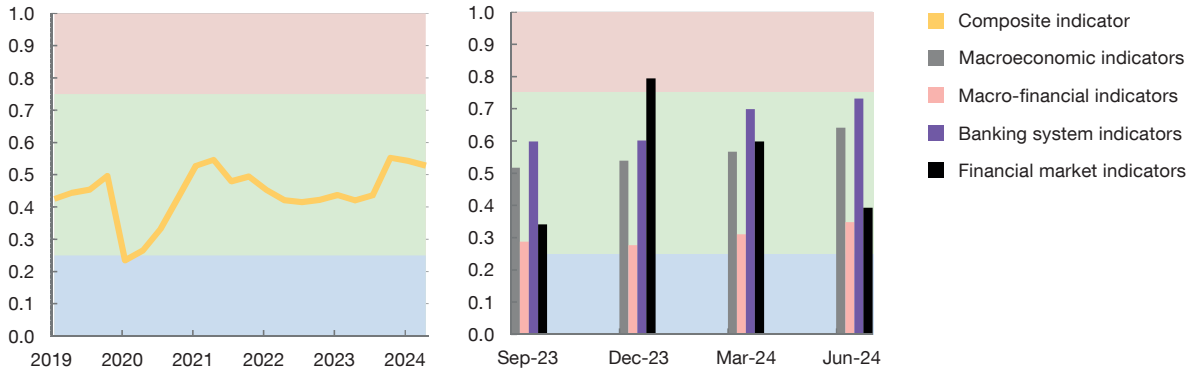
5 Indicators calculated on the basis of the consolidated and individual accounting information reported by credit institutions to the Banco de España.

6 For a detailed description of the indicators used to monitor sectoral credit cycles, see Carmen Broto, Esther Cáceres and Mariya Melnychuk. (2022). "Sectoral indicators for applying the Banco de España's new macroprudential tools". Financial Stability Review – Banco de España, 42. Also, Box 3.1 of the Spring 2022 Financial Stability Report.

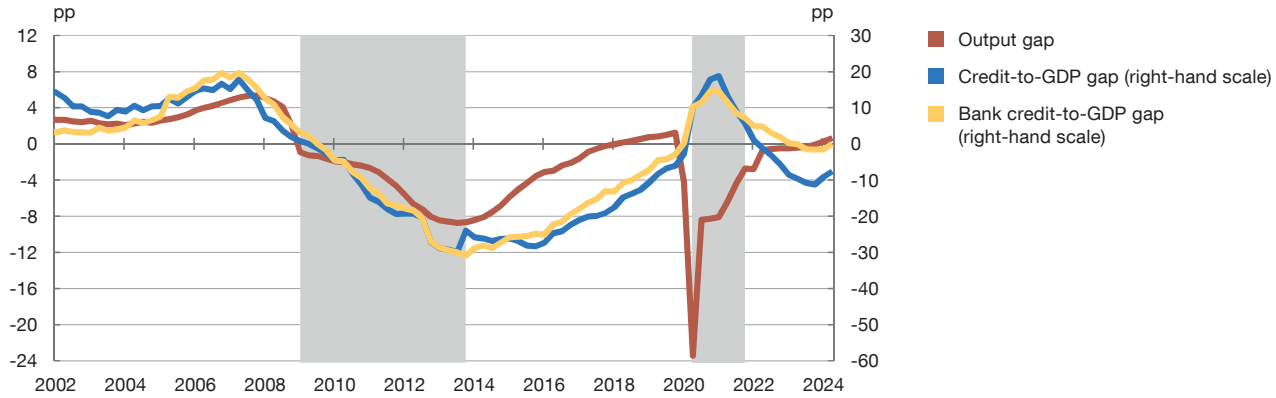
Chart 3.1

Cyclical systemic risks are at a standard level. The increase in the credit-to-GDP gap and the output gap remaining at positive levels are noteworthy

3.1.a Composite indicators (a)



3.1.b Credit-to-GDP gap and output gap (b)



SOURCES: Banco de España, INE and Datastream.

a Data updated as at June 2024. The indicators are defined between 0 and 1 on the basis of the percentile relative to their historical distribution. The blue (green) [red] shaded areas correspond to a signal of a low (standard) [high] level of cyclical systemic risk.

b The output gap represents the percentage difference between observed GDP and its quarterly potential level. Values calculated at constant 2010 prices. See Pilar Cuadrado and Enrique Moral-Benito. (2016). "Potential growth of the Spanish economy". Documentos Ocasionales, 1603, Banco de España. The credit-to-GDP gap is calculated as the percentage point difference between the observed ratio and its long-term trend calculated by applying a one-sided statistical Hodrick-Prescott filter with a smoothing parameter of 25,000. This parameter is calibrated to the financial cycles historically observed in Spain. See Jorge E. Galán. (2019). "Measuring credit-to-GDP gaps. The Hodrick-Prescott filter revisited". Documentos Ocasionales, 1906, Banco de España. The bank credit-to-GDP gap is calculated identically to the credit-to-GDP gap, but only taking into account bank lending. Data available up to June 2024. The grey shaded areas show two crisis periods identified in Spain since 2009: the systemic banking crisis (2009 Q1 to 2013 Q4) and the economic crisis triggered by the COVID-19 pandemic (2020 Q1 to 2021 Q4).

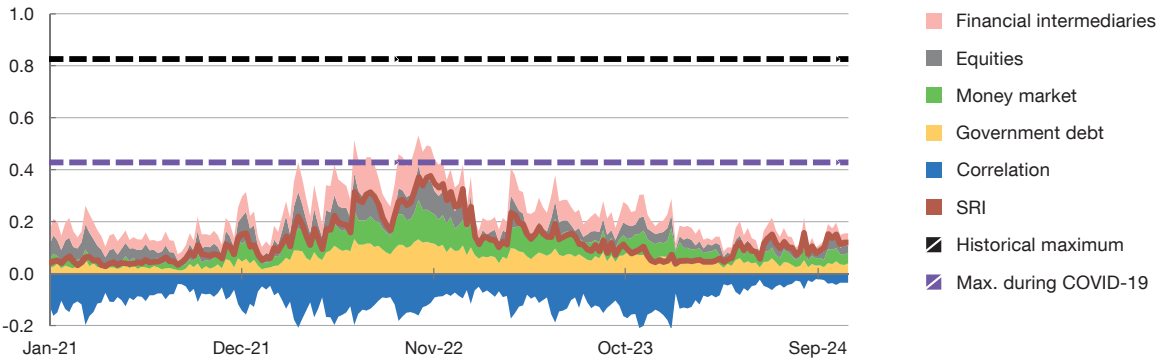
The financial markets have shown resilience to systemic tensions, but they remain vulnerable to negative surprises. The burst of volatility on the financial markets last August was short-lived, as shown by the systemic risk indicator (SRI), which is included as the market component within the key indicators.[7] Except for the isolated surge in the first week of August,

7 This indicator comprises information on the four most representative segments of Spain's financial markets (the money, government debt and equity markets and financial intermediaries) and is designed to increase in value when tensions arise simultaneously in these four segments. For a detailed explanation of the SRI calculation methodology, see Box 1.1 of the May 2013 Financial Stability Report.

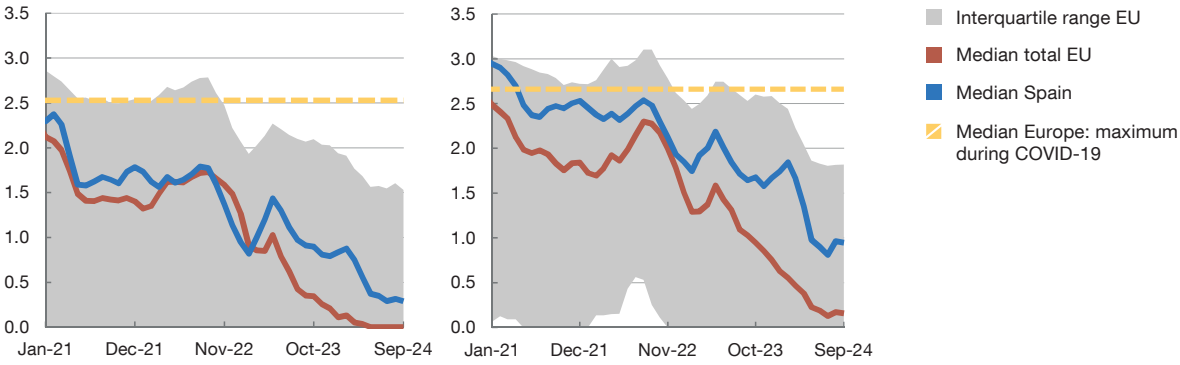
Chart 3.2

Financial markets showed their resilience during the episode of instability over the summer and the SRISK indicator for banks has decreased

3.2.a Systemic risk indicator (a)



3.2.b Distribution of the SRISK indicator with a European equity market correction of 10% (l-h panel) and 40% (r-h panel) (b)



SOURCES: Datastream, S&P Capital IQ and Banco de España.

a The SRI aggregates 12 individual stress indicators (including volatilities, interest rate spreads and maximum historical losses) from four segments of the Spanish financial system. The effect of cross-correlations is taken into account to calculate the SRI, such that it registers higher values when the correlation between the markets is high and lower values when the correlation is low or negative. For a detailed explanation of this indicator, see Box 1.1 of the May 2013 FSR. The black dotted line represents the SRI's historical maximum (since January 2000). The purple dotted line represents the SRI's maximum value since the COVID-19 crisis. Data updated as at 23 October 2024.

b The SRISK indicator is expressed as a percentage of each bank's total assets. The parameters used are 4.5% for capital requirements, 10% (left-hand panel) and 40% (right-hand panel) for the decline in the European equities index and 22 (left-hand panel) and 132 (right-hand panel) business days for the period over which the hypothetical market decline occurs; for more details see Carmen Broto, Luis Fernández Lafuerza and Mariya Melnychuk. (2022). "Do buffer requirements for European systemically important banks make them less systemic?". Documentos de Trabajo, 2243, Banco de España. The SRISK indicator for the months of 2024 Q3 is calculated based on 2024 Q2 assets and liabilities values, drawing on the stock price data of the corresponding month. The time series have been smoothed using a three-month moving average. The interquartile range is defined as the difference between the 75th and 25th percentiles of the SRISK distribution for EU banks. The dotted line represents the SRISK's maximum value since the COVID-19 crisis. Data updated as at 30 September 2024.

the SRI held relatively stable in Q2 and Q3 (see Chart 3.2.a). However, as discussed in Chapter 1, the price of some risky financial assets remains far off their fundamentals. This may contribute to a sharp correction, as evidenced by their high sensitivity to bad economic news.

The banking system indicators also suggest that activating the CCyB at the established rate would have a very small impact on banks' activity. As analysed in detail in Chapter 2 of this report, bank profitability is at high levels and, while it is expected to ease slightly, under

the baseline scenario it will only do so marginally and gradually. Bank asset quality has not deteriorated significantly either.

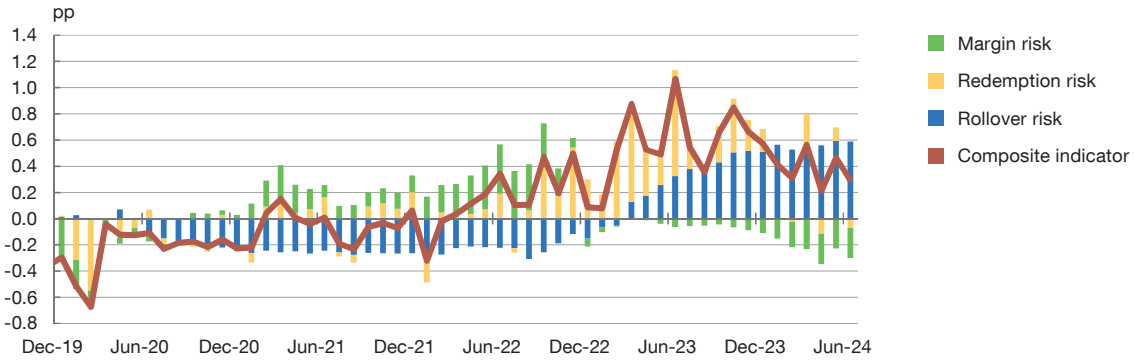
The systemic risk indicator for banks (SRISK)[8] continues to fall, amid favourable financial market conditions. European banks' balance sheet position and the sound performance of their stock prices mean that the median capital shortfall is very low, as estimated by the SRISK under an adverse scenario characterised by the market corrections typically used for this analysis (market correction of 10% lasting for 30 days) (see Chart 3.2.b, left-hand panel). Indeed, the median SRISK for the European Union (EU) as a whole stands at its lowest level since the 2020 health crisis.

However, the possibility of sharper financial market corrections and the SRISK heterogeneity across banks continue to signal some risk. In a setting marked by greater concern about financial market risks, applying SRISK to a more adverse scenario, with a greater correction (40%) over a longer period (six months), signals a larger – albeit still limited – contribution to systemic risk at the median bank (see Chart 3.2.b, right-hand panel). In addition, even when assuming a smaller correction, the interquartile range of the SRISK estimates shows significant cross-bank heterogeneity in 2024 H1 (see Chart 3.2.b). The

Chart 3.3

The recent decrease in interest rates and the asset encumbrance ratio have lowered bank funding liquidity risk

3.3.a Composite indicator of funding liquidity (a)



SOURCE: Banco de España.

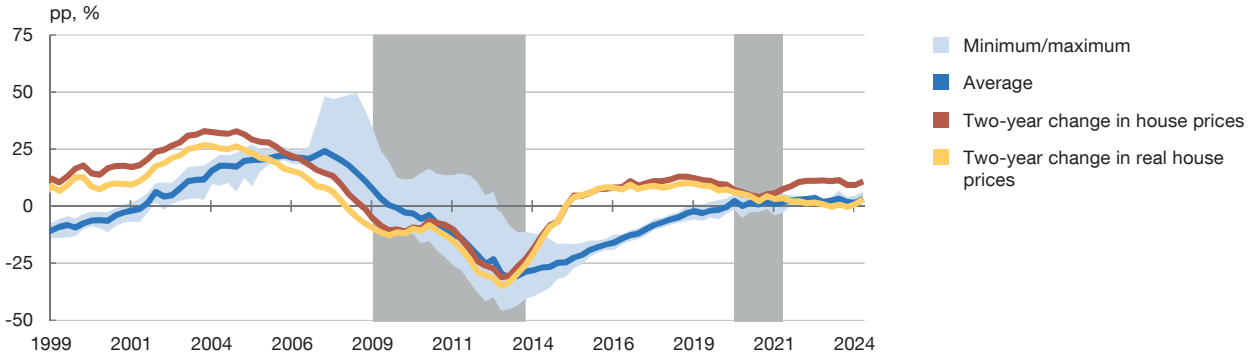
a The funding liquidity index draws on 13 indicators grouped into three dimensions: (i) margin risk (asset encumbrance ratio, re-use of collateral); (ii) redemption risk (monthly change in deposit rates for households and firms, liquidity coverage ratio); and (iii) rollover risk (level of deposit rates for households and firms, percentage of market funding, EURIBOR-OIS spread). The composite index measures the number of standard deviations from the mean of the indicators that make up each of the three dimensions (all the dimensions have the same weight). Higher composite indicator levels denote lower liquidity. The chart also shows the contribution that each dimension makes to the composite indicator. Data available up to June 2024.

8 Christian Brownlees and Robert F. Engle. (2017). "SRISK: a conditional capital shortfall measure of systemic risk". *The Review of Financial Studies,* 30, pp. 48-79. This indicator measures the market value of the regulatory capital shortfall of an individual bank or the banking sector overall following a significant correction in the equity market. It is, therefore, a systemic risk metric, since the high cost of making up a capital shortfall for the banking sector could distort financial intermediation.

Chart 3.4

The indicators of house price imbalances remain slightly above equilibrium, subdued by growth in per capita income

3.4.a Indicators of house price imbalances (a) (b)



SOURCES: Banco de España and INE.

a The vertical grey shaded areas denote the periods of the two financial crises in Spain since 2009: the last systemic banking crisis (2009 Q1-2013 Q4) and the economic crisis triggered by the COVID-19 pandemic (2020 Q1-2021 Q4). Data updated as at June 2024.

b The blue shaded area denotes the minimum and maximum values of four indicators of house price imbalances: (i) the real house price gap; (ii) the house price-to-household disposable income ratio gap; (iii) the ordinary least squares (OLS) model, which estimates house prices based on long-term trends in household disposable income and mortgage rates; and (iv) the error correction model that estimates house prices based on household disposable income, mortgage rates and fiscal effects. The long-term trends for indicators (i) to (iii) are calculated using a statistical one-sided Hodrick-Prescott filter with a smoothing parameter equal to 400,000. All four indicators have an equilibrium value of zero. The cumulative two-year growth in nominal and real house prices is also depicted.

median SRISK for Spanish banks is higher than the median for the EU as a whole. This difference is partly due to banks in the EU as a whole having higher market capitalisation-to-total asset ratios than the average for Spanish banks.

The funding liquidity risk indicator eased in 2024 H1. This composite indicator summarises information on three key liquidity risk dimensions: collateral value and availability, the volume of redemptions and rollover costs.[9] The deterioration that began in early 2023 was due mainly to the rise in interest rates, which had a direct impact on both the rollover cost for short-term financing and redemption risk. However, expectations of the European Central Bank (ECB) easing its monetary policy stance, borne out in June, September and October, have helped reduce these risks, as is evidenced by the decline in the indicator (see Chart 3.3). The decrease in the asset encumbrance ratio[10] and, therefore, in margin risk, also contributed to the easing of the composite indicator. The fresh interest rate cuts expected by the markets should result in this indicator easing further still over the coming quarters.

House price imbalance indicators remain in positive territory, only slightly above equilibrium (see Chart 3.4). These indicators have held at moderately positively values since

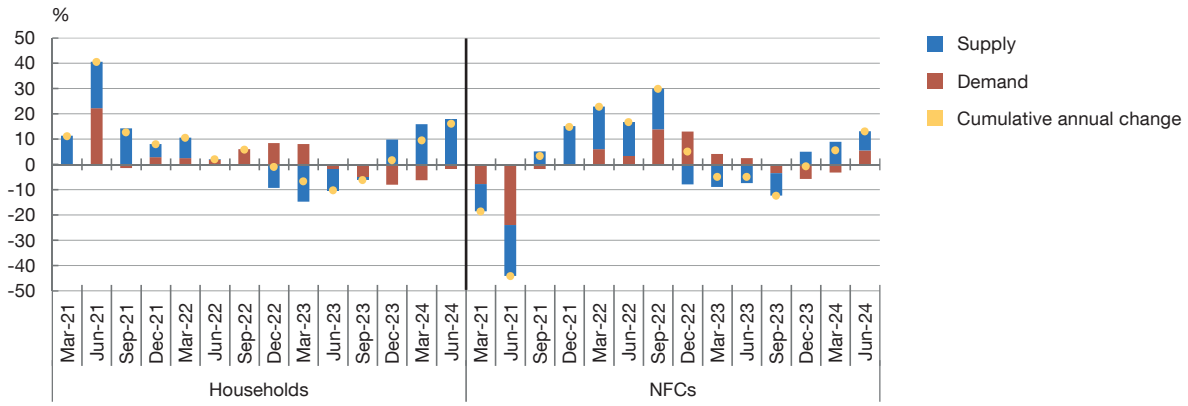
9 Margin risk is the risk of a change in value of the collateral provided and, therefore, in the haircut or margin of a secured loan; redemption risk is the risk of depositors withdrawing their funds; and rollover risk is the risk of maturing short-term funding being replaced or rolled over at a higher cost.

10 The proportion of encumbered assets that are therefore unavailable to be pledged as collateral against new secured funding.

Chart 3.5

New lending to NFCs and households grew in the first two quarters of 2024, driven mainly by supply-side factors and, to a lesser extent, by demand-side factors

3.5.a Macroeconomic decomposition of new lending to households and NFCs, by supply and demand-side factors (a)



SOURCES: ECB and Banco de España.

a Cumulative year-on-year change. Supply and demand effects estimated with an S-VAR model, using data on volumes and loan-deposit interest rate spreads for new lending in euro area countries. The model is estimated by means of Bayesian inference, using a Gibbs sampling algorithm and Minnesota priors, drawing on 5,000 MCMC (Monte Carlo Markov Chain) samples out of a total of 50,000 iterations.

2021, with limited fluctuations. Favourable household income developments have offset the rise in house prices and interest rates, preventing warning signals from appearing. However, the recent acceleration in house prices and interest rate cuts could mean this situation changes over the coming quarters.

In 2024 Q1 and Q2 the flow of new lending to households and NFCs increased – albeit less so to the latter – mainly because of supply-side factors. The Banco de España regularly uses econometric models that enable the flow of new credit to be decomposed into supply and demand-side factors. Their results point to supply-side factors playing an important role in the growth in lending to households up to mid-2024, while demand-side factors have continued to operate in the opposite direction, albeit much less intensely. With regard to lending to NFCs, supply-side and, to a lesser extent, demand-side factors also contributed to the growth in new lending recorded in the first two quarters of the year (see Chart 3.5). According to the Bank Lending Survey (EPB by its Spanish initials), loan demand has performed favourably across all segments over the first three quarters of 2024 and is expected to continue to do so in the coming quarters.[11] The EPB shows that credit supply was flatter than estimated using the econometric models.

Interest rate spreads (over market reference rates) for new loans to households and NFCs continue to widen (see Chart 3.6).[12] These spreads hit lows between 2022 H2 and

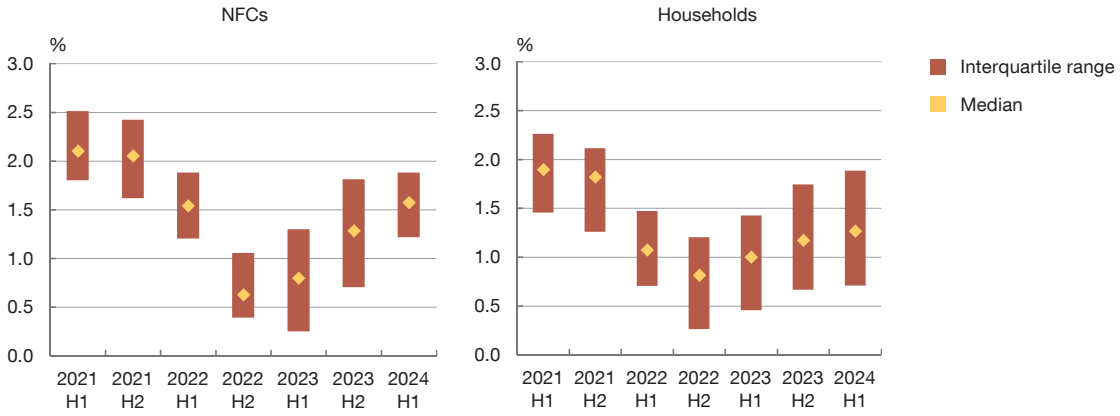
11 Nota de Prensa of the Banco de España (available only in Spanish) on the results of the 2024 Q3 EPB, of 15 October 2024. For Bank Lending Survey data at European level (which include the Spanish data), see Euro area bank lending survey.

12 The spreads are calculated by reference to the interest rate swap (IRS) benchmark rate according to their maturity.

Chart 3.6

Interest rate spreads over reference rates have widened in new lending to NFCs and in new mortgages to households

3.6.a Distribution, by institution, of the interest rate spreads for new lending to NFCs and new mortgages to households (a)



SOURCE: Banco de España.

a The chart depicts the interquartile range (difference between the 75th and 25th percentiles) and the median of the average interest rate spread (weighted by the loan amount) applied by deposit institutions over the IRS curve, for new mortgages to households and new lending to NFCs in the corresponding half-year period, drawing on information reported in confidential financial statements. For households, the spread is calculated based on new loans in four maturity intervals (floating and initial rate fixation periods of up to one year, between one and five years, between five and ten years, and over ten years). Each interval is compared with the IRS rate for the mortgage term at the midpoint of the respective interval. For floating-rate loans with a rate fixation period of up to one year the 1-year IRS rate is used, and for loans with a fixation period of over ten years the 25-year IRS rate is used (25 years being the average term of new mortgages with a term of over ten years). For NFCs, the spread is calculated based on new loans in six maturity intervals (floating and initial rate fixation periods of up to three months, between three months and one year, between one and three years, between three and five years, between five and ten years, and over ten years). Each interval is compared with the IRS rate at the midpoint of the respective interval. For floating-rate loans with a rate fixation period of up to one year the 1-year IRS rate is used, and for loans with a fixation period of over ten years the 25-year IRS rate is used.

2023 H1, when the pass-through of the ECB's interest rate hikes to reference rates was quicker and more complete than the partial and lagged pass-through to lending rates. Spreads on new loans to NFCs started to widen in 2023 and have continued to do so in 2024. Meanwhile, spreads on new mortgage lending to households have widened less markedly and remain at historically low levels, with greater cross-bank heterogeneity.

Loan maturities for new lending to NFCs and new mortgages to households have increased slightly. The average maturity for lending to NFCs stood at 2.7 years in 2024 H1, up from 2.2 years in 2023. The maturity distribution of mortgage lending to households is holding relatively stable compared with 2023 and in 2024 Q1 most loans were concentrated around 25 years; for a small group of banks average maturities were just over 30 years.

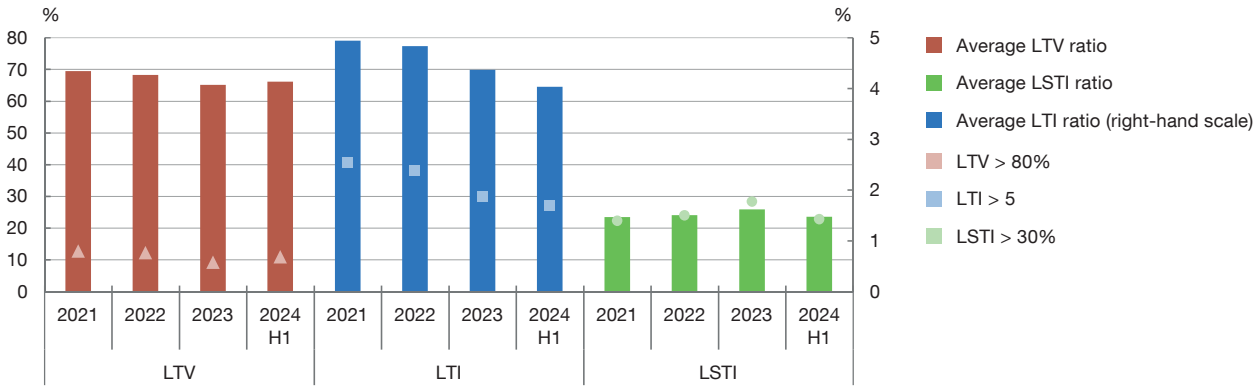
The ratio between the amount of new mortgage loans and the collateral provided increased slightly in 2024 H1. The average LTV ratio for these loans increased slightly in 2024 H1 compared with the 2023 average, rising by 1 percentage point to 66.8%. Moreover, the portion of new mortgage loans with an LTV ratio above 80% stood at 11.1% in 2024 H1, only marginally higher than in the previous two years (see Chart 3.7).

The downward trend in the loan-to-income (LTI) ratio has continued, with the household debt burden now also declining. The steady correction since 2022 in the LTI ratio (which

Chart 3.7

The LTV ratio rose slightly in 2024 H1, while the LTI and LSTI ratios fell

3.7 Credit standards for new mortgage lending to households (a) (b) (c)



SOURCE: Banco de España.

a The LTV ratio is the amount of the mortgage principal relative to the appraisal value of the property. The average LTV ratios are weighted by the principal of each mortgage and calculated for new mortgages.

b The LTI ratio is estimated for each mortgage as the ratio of the initial mortgage amount to the household's net income. The definition of income used in this report has been revised to align it with Recommendation ESRB 2016/14. This entails using net household income rather than gross income as had previously been the case. Specifically, up to 2021 average net income by postcode, available in the Household income distribution map for Spain provided by the INE, was used. Given that this information is only available with a two-year lag (as it is based on tax data), to infer household income for the period 2021-2023 the income data for 2020 are extrapolated using aggregate information for the entire country on the course of net household income, which is also provided by the INE. Since 2024, banks have started to report to the Central Credit Register (CCR) more detailed information on the income declared in order to grant each new mortgage. This definition of income is aligned with the guidelines established in Recommendation ESRB 2016/14, as stipulated in Banco de España Circular 2/2023 on the CCR. A value for income based on the information available by postcode is imputed to those loans in the CCR with empty or ineligible values for 2024 for the required income data.

c The average LTI and LSTI ratios are calculated as the averages of those ratios in each mortgage weighted by their relative share (in terms of the principal) in the total mortgage portfolio for which the information needed to calculate the ratio is available.

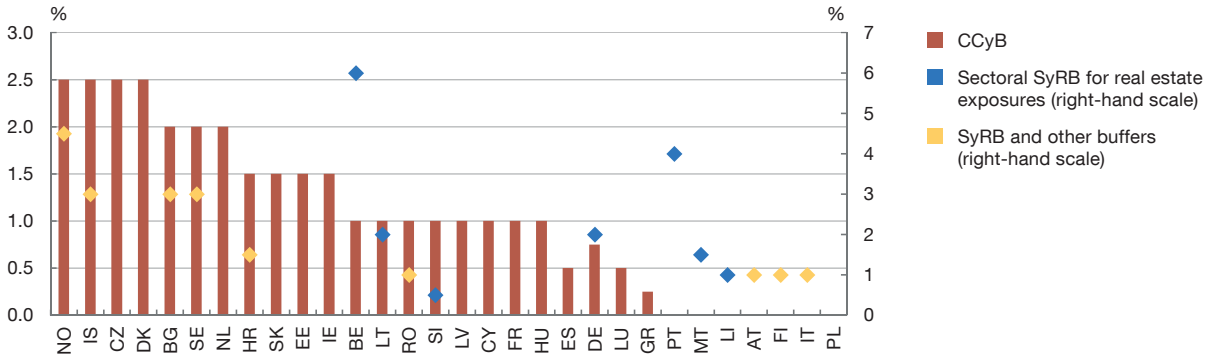
uses net income as a measure of household income) continued in 2024 H1. Meanwhile, the debt burden – as measured by the loan service-to-income (LSTI) ratio – fell on average in 2024 H1, to 23.5%. In addition, the percentage of new mortgages with an LSTI ratio of over 30% is slightly lower than in the previous two years.[13] Therefore, neither of these two indicators are signalling an easing of credit standards for mortgages.

Analysing credit standards for lending to firms is also important. The Banco de España is developing indicators to monitor credit standards for lending to firms and is assessing the indicators' ability to anticipate non-performance issues at firms granted loans under looser conditions (see Box 3.1).

13 The definition of income used in this report has been revised to align it with Recommendation ESRB 2016/14. This entails using net household income rather than gross income as had previously been the case. Specifically, up to 2021 average net income by postcode, available in the Household income distribution map for Spain provided by the National Statistics Institute (INE), was used. Given that this information is only available with a two-year lag (as it is based on tax data), to infer household income for the period 2021-2023 the income data for 2020 are extrapolated using aggregate information for the entire country on the course of net household income, which is also provided by the INE. Since 2024, banks have started to report to the Central Credit Register (CCR) more detailed information on the income declared in order to grant each new mortgage. This definition of income is aligned with the guidelines established in Recommendation ESRB 2016/14, as stipulated in Banco de España Circular 2/2023 on the CCR. A value for income based on the information available by postcode is imputed to those loans in the CCR with empty or ineligible values for 2024 for the required income data.

Chart 3.8
Virtually all EU/EEA countries now have a releasable macroprudential buffer

3.8.a Macroprudential capital buffers in European countries (a)



SOURCES: ESRB and Banco de España calculations.

a This chart includes the latest CCyB rates announced by European countries (EU/EEA). Increases in the CCyB rates are applicable 12 months after they are announced. The chart also depicts the sectoral SyRB for real estate exposures and the SyRB and other buffers in the countries that have activated them. Italy's SyRB only applies to domestic exposures. The SyRB buffer rates for Austria and Romania refer to the maximum of an established range (0.5-1 and 0-1, respectively). Data as at June 2024.

The situation identified, in which cyclical systemic risks are at an intermediate level, supports implementing a CCyB rate of 0.5% applicable to exposures in Spain in 2024 Q4. This decision was announced on 1 October, taking into account the observations received in a public information consultation process.[14] The decision is also consistent with the ECB's assessment of the current situation.[15] In addition, it complies with the International Monetary Fund's recommendation, in its latest assessment of the Spanish financial system, of adopting a positive neutral CCyB (see Box 3.2). The Banco de España will continue to review quarterly developments in cyclical systemic risks. If the current situation continues, the CCyB will foreseeably increase to 1% as from 1 October 2025 and will be binding for institutions a year later.

Virtually all European countries have set a positive rate for releasable macroprudential capital buffers. After Spain, as mentioned above, Greece was the latest country to announce the implementation of a CCyB rate, initially set at 0.25% but expected to increase it to 0.5% next year. In addition, some authorities are still applying systemic risk buffers (SyRBs), with the sectoral SyRB being used in many cases to address real estate market vulnerabilities in particular (see Chart 3.8). Lastly, it should be noted that the Banco de España applied reciprocating measures after the implementation of the SyRB by Portugal

14 See the press release "The Banco de España approves the new framework for setting the countercyclical capital buffer and sets the buffer rate for 2024 Q4 at 0.5%", of 1 October 2024.

15 See the Governing Council statement on macroprudential policies, of 28 June 2024, which indicates that building up macroprudential buffers under prevailing conditions would generate low costs which are even lower against the current backdrop of highly profitable banks.

and Italy, since certain Spanish institutions have material exposures in either of the two countries (see Box 3.3).

3.2 Regulatory and supervisory developments relevant to financial stability

3.2.1 Regulatory developments related to solvency in the EU and in other jurisdictions

The amending Capital Requirements Regulation (CRR III) and Capital Requirements Directive (CRD VI)[16] were published in June. This legislative package completes the implementation in the EU of the globally agreed outstanding Basel III reforms and also includes other measures to strengthen the European prudential framework and to ensure that the banking sector is better prepared to face new challenges such as the transition to climate neutrality. Most of the provisions will enter into force gradually as from 2025, subject, in the case of the CRD VI, to their compulsory transposition into national law by January 2026.

The new features of the CRR III include, most notably, those focused on obtaining a more uniform measurement of risk, namely, on reducing the dispersion in the calculation of risk-weighted assets, the denominator of the solvency ratio. For instance, in addition to making certain standardised approaches more risk sensitive, some restrictions are introduced on the use of internal models. Significantly, the output floor is introduced. This restricts the lower limit on the risk exposure obtained by using internal models to 72.5% (as from 2030) of the limit that would apply if using standardised approaches. In the same vein, the European Banking Authority (EBA) has received a high number of mandates from European legislators to operationalise this regulation.

The EU has fully transposed the Basel III framework by establishing certain – in principle, transitional – European specificities. However, given the uncertainty surrounding the implementation of Basel III mainly in the United States, the European Commission has used its legal capacity to postpone the entry into force of the market risk framework to 1 January 2026.[17]

An important legislative development in the CRD VI refers to using the SyRB to address climate-related risks. Designated authorities, to the extent that they consider that climate risks may have serious negative consequences for the financial system, should introduce an SyRB that could be applied to some sets or subsets of exposures, such as those subject to physical and transition risks related to climate change, if they consider that it would be an effective and proportionate measure to mitigate such risks. Methodological challenges, data

16 Regulation (EU) 2024/1623 of the European Parliament and of the Council of 31 May 2024 amending Regulation (EU) No 575/2013 as regards requirements for credit risk, credit valuation adjustment risk, operational risk, market risk and the output floor Directive (EU) 2024/1619 of the European Parliament and of the Council of 31 May 2024 amending Directive 2013/36/EU as regards supervisory powers, sanctions, third-country branches, and environmental, social and governance risks.

17 See press release of the European Commission "Commission proposes to postpone by one year the market risk prudential requirements under Basel III in the EU", of 24 July 2024.

Figure 3.1
Regulatory developments relevant to financial stability

limitations and the correct separation of the climate component from other risk factors for the banking sector are the challenges that should be addressed by the potential calibration of the SyRB for this purpose.

Some jurisdictions, such as the United States and the United Kingdom, will implement the latest Basel III reforms after the EU.[18] In the case of the United States, the proposals to finalise the implementation of Basel III and to adjust the macroprudential capital surcharge for its global systemically important banks will be subject to consultation again[19] on account of the changes triggered by the scope of the feedback on the first draft of the rules. The Federal Reserve's re-proposal is expected to ease the requirements envisaged in the original proposal, which in many aspects was stricter than Basel III and, for the first time in the United States,

18 Globally, the Group of Central Bank Governors and Heads of Supervision (GHOS) of the Bank for International Settlements acknowledges the progress made in the implementation of the Basel III reforms. At its May meeting, it reiterated its expectation that all jurisdictions will have fully implemented the reforms by 2025. See the BCBS press release "Governors and Heads of Supervision reiterate commitment to Basel III implementation and provide update on cryptoasset standard", of 13 May 2024.

19 See the speech by Michael S. Barr, Vice Chair for Supervision of the Board of Governors of the Federal Reserve System, "The Next Steps on Capital", of 10 September 2024.

also applied to banks that are not internationally active. At the cut-off date for this Financial Stability Report, the Vice Chair for Supervision of the Federal Reserve had already announced that banks with assets of between $100 and $250 billion would be exempt from applying these reforms, except for the requirement to recognise unrealised gains and losses of their held-to-maturity securities in regulatory capital. In the United Kingdom, the Prudential Regulatory Authority (PRA) published in September the final draft[20] for incorporating the outstanding Basel III reforms into law. The PRA considers that Tier 1 capital requirements for major UK firms will essentially remain unchanged and will increase by less than 1% from January 2030, when the four-year transitional period – postponed until 1 January 2026 – ends.

3.2.2 Other developments in the EU

In May this year, the European Commission launched a public consultation on macroprudential policies for NBFI.[21] The aim of the consultation is to gather further feedback, mainly from authorities, on the suitability of a macroprudential framework for NBFI. The consultation is based on a recent Commission report[22] which identified the vulnerabilities of non-bank financial intermediaries (NBFIs) regarding liquidity mismatches, excessive leverage and strong interconnectedness among NBFIs and between NBFIs and credit institutions. This report also identified possible improvements to macroprudential coordination throughout the EU. Against this background, the consultation is structured around: i) risks and vulnerabilities of NBFIs; ii) tools to address liquidity risk and excessive leverage; iii) interconnectedness; and iv) supervisory coordination in the EU.

In October, the European Commission opened a public consultation on the functioning of the EU securitisation framework.[23] The purpose of this process is to gather the views of EU securitisation market participants about the effectiveness of the current framework and possible changes to improve it. For this purpose, several issues are addressed relating to, for example, the scope of application of the Securitisation Regulation, transparency requirements and the prudential treatment of this type of financial product. The goal is to relaunch securitisation as a means of strengthening the lending capacity of European banks and, thus, increasing the EU's competitiveness. This initiative is part of the capital markets union action plan.

The review of the resolution framework continues to move forward. The Council of the European Union agreed its position on the review of the bank crisis management and deposit insurance framework[24] so that it can begin negotiating with the European Parliament. This

20 See the Bank of England press release "The PRA publishes the second policy statement on Basel 3.1 and proposals on the strong and simple capital regime for smaller firms", of 12 September 2024.

21 See "Targeted consultation assessing the adequacy of macroprudential policies for non-bank financial intermediation (NBFI)", of 22 May 2024.

22 See "Commission report on the macroprudential review for credit institutions, the systemic risks relating to Non-Bank Financial Intermediaries (NBFIs) and their interconnectedness with credit institutions", of 24 January 2024.

23 See "Targeted consultation on the functioning of the EU securitisation framework", of 9 October 2024.

24 See the press release of the Council of the European Union "Bank crisis management and deposit insurance framework: Council agrees on its position", of 19 June 2024.

review includes a set of measures for bank crisis management in the EU and, in particular, for improving the resolution process for small and medium-sized banks. In particular, the revised framework aims to broaden the scope of resolution and, at the same time, to increase the funds available for the financing of these processes. The Council's text is notably complex due to the many limitations and requirements established, precisely in processes that need to be considerably agile to minimise their impact on financial stability.

The work of the European System of Financial Supervision continues in the area of cyber resilience. The three European supervisory authorities (the EBA, the European Securities and Market Authority and the European Insurance and Occupational Pensions Authority) have set up a framework[25] for coordination in the event of systemic cyber incidents envisaged in the Digital Operational Resilience Act and to comply with Recommendation ESRB/2021/17. This framework would permit an effective response to cyber incidents that might pose a financial stability risk. Similarly, the EBA is complying with the mandates received in this act and also in the Markets in Crypto-Assets Regulation which came into effect recently. The ESRB published a report[26] which analyses, from a macroprudential standpoint, the operational policy tools existing in the EU and their potential use in the event of a systemic cyber incident. The report classifies the tools identified under three categories based on their approach: i) gathering, sharing and managing information; ii) coordination between authorities and with institutions; and iii) emergency and back-up systems.

3.2.3 Other global developments

The BCBS has published a framework for the disclosure of crypto-asset exposures and introduced amendments to its prudential requirement framework for these instruments.[27] The new disclosure framework will provide common requirements for the disclosure of crypto-asset exposures and improve information availability and market discipline. This new framework will apply as of 1 January 2026, which is also when the latest amendments to the prudential standard on crypto-assets will be implemented. These amendments clarify, among other aspects, the criterion for stablecoins to receive preferential regulatory treatment.

Likewise, the BCBS has published reports on the banking turmoil[28] in spring 2023 and the digitalisation of finance.[29] The former includes an updated empirical analysis on liquidity risk dynamics observed during the turmoil last year (with the Swiss institution, Credit Suisse, and with Silicon Valley Bank and other medium-sized banks in the United States). The

25 See the press release "ESAs establish framework to strengthen coordination in case of systemic cyber incidents", of 17 July 2024.

26 See the ESRB report Advancing macroprudential tools for cyber resilience – Operational policy tools, of 16 April 2024.

27 See the BCBS reports Disclosure of cryptoasset exposures and Cryptoasset standard amendments, of 17 July 2024.

28 See the BCBS press release "Basel Committee publishes G20 progress report on the 2023 banking turmoil and liquidity risk", of 11 October 2024.

29 See the BCBS report Digitalisation of finance, of 16 May 2024.

BCBS will continue working to increase the effectiveness of banking supervision and is considering options to revise specific features of the Basel Framework, such as liquidity risk and interest rate risk in the banking book (IRRBB). The latter report analyses the implications of the digitisation of finance for banks and supervisory authorities, insofar as they can benefit banks and their customers but can also represent a source of vulnerabilities and amplify existing risks.

In addition, the BCBS has also published the review of the Basel Core Principles (BCPs)[30] for effective banking supervision and its IRRBB standard. This is the third revision of the BCPs since they were introduced in 1997, having previously been revised in 2006 and 2012. It includes, among other things, new risks such as climate-related risks and the digitalisation of finance.[31] Likewise, several principles were amended to strengthen macroprudential oversight and foster coordination among supervisory authorities, as well as to clarify their role in the risk mitigation process. Following the consultation[32] by the BCBS, it published a report[33] setting out the adjustments to the framework for interest rate shocks referred to by the IRRBB standard.

The BCBS has consulted on the principles for the sound management of third-party risk[34] and on guidelines for counterparty credit risk management.[35] The former stems from the risk of the banking sector being increasingly reliant on third-party services, particularly due to digitalisation and financial technology. The guidelines for counterparty credit risk are intended to address the weaknesses detected following cases such as that of Archegos. For instance, they foster the ongoing analysis of counterparties, developing a counterparty risk mitigation strategy, using additional metrics for risk monitoring and limitation, and building a risk governance framework.

The Financial Stability Board (FSB) has introduced a new framework for the orderly resolution of central counterparties (CCPs). The report[36] published on this issue underlines the importance of the availability of liquidity, loss-absorbing capacity and tools to maintain the continuity of critical functions and to mitigate the adverse effects on financial stability, should it be necessary to resolve a CCP, particularly systemically important CCPs. The FSB will monitor the implementation of the new framework for systemically important CCPs and will publish the results in its annual resolution report.

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30 See the BCBS document Core Principles for effective banking supervision, of 25 April 2024.

31 For more information on the latest revision of the BCPs, see Asunción Alonso, Danae Durán, Belén García-Olmedo and Quaada María Antonia Quaada. (2024). "Basel core principles for effective banking supervision: an update after a decade of experience". Financial Stability Review – Banco de España, 46, Spring.

32 See BCBS press release "Basel Committee consults on targeted adjustments to its standard on interest rate risk in the banking book", of 12 December 2023.

33 See BCBS document "Recalibration of shocks for interest rate risk in the banking book", of 16 July 2024.

34 See BCBS press release "Basel Committee consults on principles for the sound management of third-party risk", of 9 July 2024.

35 See the BCBS press release "Basel Committee publishes consultation on guidelines for counterparty credit risk management", of 30 April 2024.

36 See FSB report Financial Resources and Tools for Central Counterparty Resolution, of 25 April 2024.

The FSB also published a report on the ongoing work of financial authorities in the area of nature and biodiversity-related financial risks. The report[37] found that the analyses in this field are at different stages based on the authority responsible, partly due to the diversity of mandates received, and it concludes that the authorities and the private sector need to know more about this issue in order to be able to address the related risks.

The FSB has submitted several other matters to public consultation. These include its assessment of the reforms on securitisation,[38] recommendations on the provision of cross-border payment services[39] and liquidity preparedness for margin and collateral requirements in situations of market stress.[40]

37 See the FSB report Stocktake on Nature-related Risks: Supervisory and regulatory approaches and perspectives on financial risk, of 18 July 2024.

38 See FSB press release "FSB consults on interim findings of its evaluation of the effects of the G20 financial regulatory reforms on securitisation", of 2 July 2024.

39 See FSB consultation Recommendations for Regulating and Supervising Bank and Non-bank Payment Service Providers Offering Cross-border Payment Services: Consultation report, of 16 July 2024.

40 See FSB consultation Liquidity Preparedness for Margin and Collateral Calls: Consultation report, of 17 April 2024.

Box 3.1

THE IMPACT OF CREDIT STANDARDS ON THE QUALITY OF LENDING TO NON-FINANCIAL CORPORATIONS

The role that the over-indebtedness of the non-financial private sector played in triggering previous financial crises[1] has spurred the development of a broad set of macroprudential tools. Notable among these is the countercyclical capital buffer, which is a releasable capital requirement that strengthens the solvency of credit institutions in boom periods, enabling them to absorb potential losses in crisis situations. But there are also macroprudential tools that strengthen the solvency of the borrowers themselves and tighten credit standards for loans to these segments.

In this regard, the link between house prices and lending in the run-up to the global financial crisis has focused attention on mortgage debt as a key determinant of systemic vulnerabilities.[2] Previous research has revealed that the easing of mortgage lending standards significantly drove up mortgage volumes prior to the global financial crisis, leaving many households highly vulnerable, and that this easing was strongly associated with the severity of the crisis.[3]

In terms of prudential policies, borrower-based measures (BBMs) such as caps on credit standards are increasingly being used as macroprudential tools to mitigate systemic risk arising from mortgage lending. Recent literature has shown that mortgage BBMs can significantly reduce the probability of mortgage defaults[4] and contain unsustainable growth in credit and house prices.[5]

This box investigates the relationship between credit standards for lending to non-financial corporations (NFCs) and default risk. This issue has received less attention, which is particularly striking given the substantial imbalances observed in corporate credit before the global financial crisis and the high non-performing loan ratios in the corporate sector during the crisis.[6]

This new analysis also provides guidance on how BBMs could be used in the corporate sector, just as they are used in the mortgage market, to boost borrower resilience and mitigate cyclical vulnerabilities.[7]

The relationship between credit standards at origination and defaults in NFC lending

The analysis[8] uses individual data on corporate credit granted in Spain in the period 2000-2020, that is, over more than one complete credit cycle. Specifically, the data cover almost 11 million loans in this period, combining data from the Central Credit Register (CCR) with balance sheet information for firms reporting to the Central Balance Sheet Data Office (CBSO), both of which are Banco de España databases.

New bank loans granted to NFCs are identified and monitored over time to check whether they enter into default during the period analysed. In addition, measures of firms' indebtedness at loan origination are built. The

1 Moritz Schularick and Alan M. Taylor. (2012). "Credit Booms Gone Bust: Monetary Policy, Leverage Cycles, and Financial Crises, 1870-2008". *American Economic Review,* Vol. 102(2), pp. 1029-1061; Stijn Claessens, M. Ayhan Kose and Marco E. Terrones. (2012). "How do business and financial cycles interact?". *Journal of International Economics,* Vol. 87, pp. 178–190.

2 Oscar Jordà, Moritz Schularick and Alan M. Taylor. (2016). "The great mortgaging: housing finance, crises and business cycles". *Economic Policy,* Vol. 31, pp. 107-152; Gerhard Rünstler and Marente Vlekke. (2017). "Business, housing, and credit cycles". *Journal of Applied Econometrics,* Vol. 33, pp. 212-226.

3 John V. Duca, John Muellbauer and Anthony Murphy. (2010). "Housing markets and the financial crisis of 2007-2009: Lessons for the future". *Journal of Financial Stability,* Vol. 6, pp. 203-217; Thomas Schelkle. (2018). "Mortgage Default during the U.S. Mortgage Crisis". *Journal of Money, Credit and Banking,* Vol. 50, pp. 1101-1137.

4 Jorge E. Galán and Matías Lamas. (2023). "Beyond the LTV Ratio: Lending Standards, Regulatory Arbitrage, and Mortgage Default". *Journal of Money, Credit and Banking,* 13041.

5 Stijn Claessens, Swati R. Ghosh and Roxana Mihet. (2013). "Macro-prudential policies to mitigate financial system vulnerabilities". *Journal of International Money and Finance,* Vol. 39, pp. 153-185; Eugenio Cerutti, Stijn Claessens and Luc Laeven. (2017). "The use and effectiveness of macroprudential policies: New evidence". *Journal of Financial Stability,* Vol. 28, pp. 203-224.

6 Ángel Estrada and Jesús Saurina. (2016). "Spanish boom-bust and macroprudential policy". *Financial Stability Review - Banco de España,* 30, pp. 35-61.

7 For a discussion on this issue, see Eoin O'Brien and Ellen Ryan. (2017). "Motivating the Use of Different Macro-prudential Instruments: The Countercyclical Capital Buffer vs. Borrower-Based Measures". *Economic Letter Series,* No. 15. Central Bank of Ireland; Nicholas Apergis, Ahmet F. Aysan and Yassine Bakkar. (2022). "Borrower- and lender-based macroprudential policies: What works best against bank systemic risk?". *Journal of International Financial Markets, Institutions and Money,* Vol. 80, 101648.

8 For more details, see Luis Fernández Lafuerza and Jorge E. Galán. (2024). "Should macroprudential policy target corporate lending? Evidence from credit standards and defaults". Documentos de Trabajo, 2413, Banco de España.

Chart 1
Impact of DTA ratio on probability of default

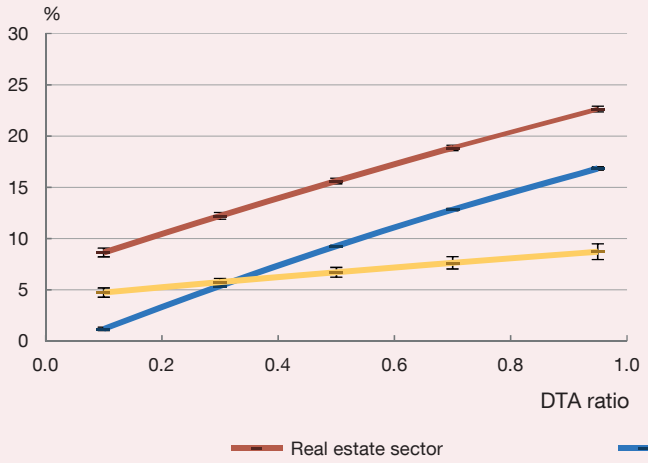
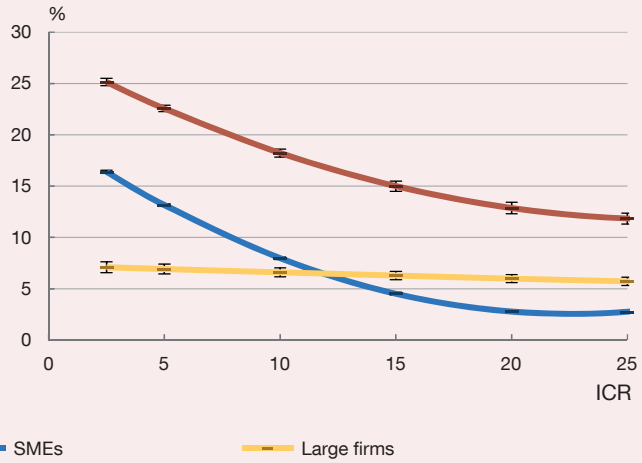


Chart 2
Impact of ICR on probability of default



SOURCE: Banco de España.

a The models used to estimate the probability of default include a linear term and a quadratic term in the standard considered (DTA ratio or ICR), a variable for negative income in the case of the ICR, in addition to controls for firm size (the logarithm of the firm's assets), liquidity (liquid assets to liquid liabilities), profitability (ROE), age, firm-level average interest rate, indicators of loan collateral and of whether the firm belongs to a business group, as well as fixed effects for bank, postcode, year and business sector (two-digit Spanish National Classification of Economic Activities (CNAE) codes). The error bars, which are scarcely visible, denote two standard errors.

analysis focuses on the debt-to-assets (DTA) ratio, which measures the level of a firm's debt to its total assets, and the interest coverage ratio (ICR), which indicates how many times a firm's earnings (EBITDA) could cover the interest payments on its outstanding debt.[9] Foreseeably, the higher a firm's DTA ratio and the lower its ICR, the worse its credit quality.

Credit to NFCs is divided into three sub-sectors: construction and real estate companies (RE), small and medium-sized enterprises in other sectors (SMEs) and large firms in other sectors. This approach aligns with that of previous studies, which highlight the benefits of conducting separate analyses by firm size and key sub-sector.[10] The RE sector is one such sector, having played a decisive role during the global financial crisis in Spain.

The relationship between credit standards at origination and defaults is assessed using a linear probability model,[11] which includes a range of firm and loan-level controls and fixed effects.

The results show that credit standards at origination are closely associated with future defaults, especially in the case of RE firms and SMEs (see Charts 1 and 2). In these results, it should be borne in mind that the estimated probabilities are relatively high given that defaults are monitored over an extensive period.

9 Debt is calculated as the sum of a firm's bank exposures in the CCR and its non-bank debt reported in the CBSO. The profit measure used is gross operating profit, as defined in Banco de España Circular 5/2021 of 22 December 2021. The effects of a firm's debt-to-income and financial costs-to-income ratios are also studied. The conclusions are similar to those obtained for the ICR ratio.

10 Kartsen Müller and Emil Verner. (2023). "Credit Allocation and Macroeconomic Fluctuations". *The Review of Economic Studies,* rdad112; Lara Cathcart, Alfonso Dufour, Ludovico Rossi and Simone Varotto. (2020). "The differential impact of leverage on the default risk of small and large firms". *Journal of Corporate Finance,* Vol. 60, 101541.

11 The models used to estimate the probability of default include as explanatory variables a linear term and a quadratic term in the standard considered, a variable for negative income in the case of the ICR, in addition to controls for firm size, liquidity, profitability, age, average interest rate, indicators of loan collateral and of whether the firm belongs to a business group, as well as fixed effects for bank, postcode, year and business sector (two-digit Spanish National Classification of Economic Activities (CNAE) codes).

In particular, highly leveraged RE firms have high probabilities of default, which can be as high as 23% for firms with a DTA ratio of 0.95. This is around 14 pp higher than the probability of default for RE firms with low leverage (DTA ratio = 0.1). The association between default and the ICR is also quite strong. RE firms with high interest coverage (ICR = 25) have a probability of default of around 12%, compared with 25% for firms with low coverage at loan origination (ICR = 2.5).

For SMEs, the estimated probabilities are somewhat lower than for RE firms. However, the sensitivity of default to a deterioration in credit standards is greater. Indeed, SMEs' probability of default increases from 1.2% for those with low DTA ratios (0.1) to around 17% for those with very high DTA ratios (0.95). Additionally, while for SMEs with a high ICR (25) at loan origination the probability of default is less than 3%, this probability rises to more than 16% for firms with a low ICR (2.5).

In the case of large firms, the probability of default associated with the different DTA ratio and ICR values is considerably lower than for other types of firms, although it is still significant given their size and the higher volume of credit granted per customer. The DTA ratio is a much more informative indicator of these firms' default risk than the ICR. Indeed, the default rate increases from 5% for firms with a low leverage ratio (DTA ratio = 0.1) to 9% for highly leveraged firms (DTA ratio = 0.95). Nonetheless, the relationship between the probability of default and the ICR is also negative and statistically significant.

The age of the firm, the existence of previous banking relationships and the position in the financial cycle also have a bearing on the probability of default

The study also finds that the relationship between credit standards at loan origination and default risk varies depending on whether or not there is a previous bank-firm relationship and the firm's age. In particular, it finds that the effect of credit standards is weaker for young firms. In other words, having worse credit standards (a higher DTA ratio or lower ICR) increases the risk of default less for young firms than for more mature ones.

There are several possible reasons for these findings. First, banks may apply stricter selection processes to these firms, which could mean that, at the time of loan origination, banks' assessments may have prioritised other risk factors not considered in the study over financial ratios. Moreover, the decision to finance younger firms may be more influenced by future growth prospects, another variable not covered in the study. The influence of age is particularly strong for SMEs and RE firms, but very weak for large ones. This suggests that the relevance of credit standards for predicting defaults is less age-sensitive in larger firms, possibly due to the higher average age of large firms and the lower range of variation in this variable among them.

As regards the bank-firm relationship, the results show that the association between credit standards and default risk is weaker in firms with new banking relationships. In particular, for firms establishing a new banking relationship, the association between the DTA ratio and the risk of default is weaker by around 45% for RE firms, 51% for SMEs and 54% for large firms. In the case of the ICR, this association is 54% lower for RE firms, 59% lower for SMEs and 28% lower for large firms. As in the case of age, one of the reasons behind these outcomes may be related to the stricter selection processes faced by firms establishing a new banking relationship.[12]

Regarding the financial cycle, the results indicate a stronger association between credit standards and default risk during periods of high credit growth than during periods of low or moderate growth. This suggests that, during phases of rapid credit expansion, easing credit standards may be related to banks' higher risk appetite, highlighting the importance of implementing limits on credit standards.

Implications for macroprudential policy and the current situation

The results described above support the use of BBMs as an effective tool to reduce corporate credit default risk and bolster financial stability during adverse events, similarly to the way they are used in lending to households.[13]

12 Allen N. Berger and Gregory F. Udell. (1995). "Relationship Lending and Lines of Credit in Small Firm Finance". *The Journal of Business,* Vol. 68, No 3, pp. 351-381.

13 Eugenio Cerutti, Stijn Claessens and Luc Laeven. (2017). "The use and effectiveness of macroprudential policies: New evidence". *Journal of Financial Stability,* Vol. 28, pp. 203-224; Ozge Akinci and Jane Olmstead-Rumsey. (2018). "How effective are macroprudential policies? An empirical investigation". *Journal of Financial Intermediation,* Vol. 33, pp. 33–57.

Chart 3
Share of loans with DTA ratio > 0.95 (a)

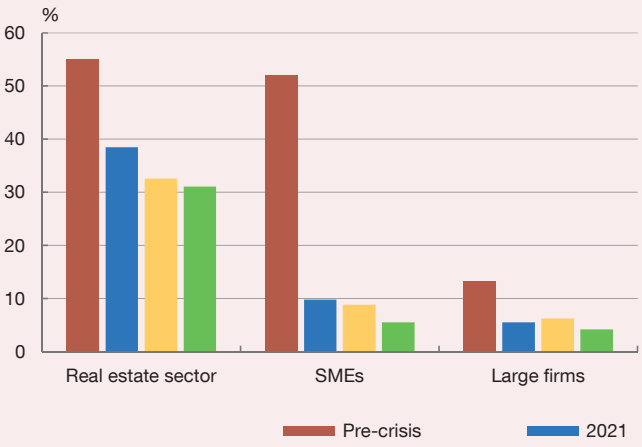
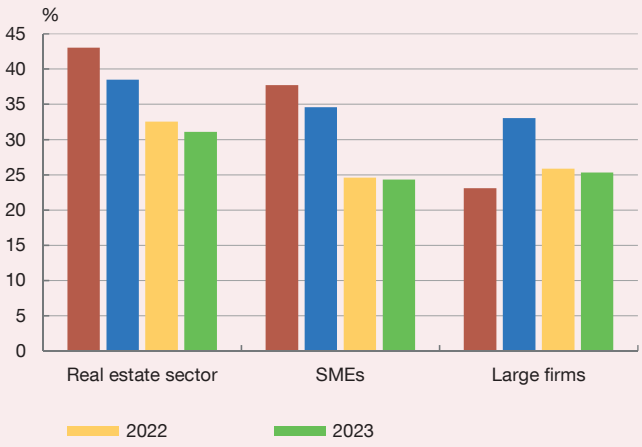


Chart 4
Share of loans with ICR < 2.5 (b)



SOURCE: Banco de España.

a Share of new loans with a DTA ratio at origination of more than 0.95. Assets are assessed at the end of the year prior to loan origination. Bank debt data from the CCR are linked with non-bank debt and assets data from the CBSO. The pre-crisis figure is the average of 2000-2008.
b Share of new loans with an ICR at origination of less than 2.5. The ratio is assessed at the end of the year prior to loan origination. The ICR is calculated as gross operating profit divided by interest expense, based on CBSO data for the sample linked to the CCR. The pre-crisis figure is the average of 2000-2008.

However, these findings also suggest that the design of these tools should take into account the specificities of corporate credit. This includes identifying key systemic sectors, such as real estate activities, and distinguishing by firm size, age and new banking relationships. In addition, the position in the financial cycle and the health of firms play a critical role in the calibration of these policies, to prevent credit constraints from adversely affecting solvent firms whose liquidity has been squeezed during financial stress events.

From a regulatory perspective, it is important to note that Spain's macroprudential framework is more advanced than that of some other European countries. In particular, current legislation already allows, where necessary, for the introduction of limits on credit standards for NFCs.[14]

In this respect, a comparison of recent credit standards with those in place before the global financial crisis (see Charts 3 and 4) shows that the share of loans with a very high DTA ratio and a very low ICR has remained relatively stable in recent years and very far removed from the figures observed before the global financial crisis. This is particularly noticeable in the RE sector and among SMEs, for which credit standards were excessively relaxed during those years.

While there is currently no noticeable decline in corporate credit standards, this new set of indicators is crucial for regularly monitoring and assessing banks' prudence in NFC lending.

14 Banco de España Circular 5/2021 of 22 December.

Box 3.2

THE INTERNATIONAL MONETARY FUND'S 2024 FINANCIAL SECTOR ASSESSMENT PROGRAM FOR SPAIN

The International Monetary Fund (IMF) concluded its latest assessment of the Spanish financial system in June. This is the fourth Financial Sector Assessment Program (FSAP) (after the 2006, 2012 and 2017 programs) the IMF has conducted in Spain. The Financial System Stability Assessment (FSSA) published on the IMF's website summarises the assessment work performed and the FSAP key recommendations for the Spanish authorities.[1]

The 2024 Spain FSAP was structured around different thematic areas. Technical notes have been published on each area, specifically detailing the IMF's analytical approach and setting out its assessment and conclusions on the situation in Spain:[2]

- systemic risk analysis;
- macroprudential policy framework and tools;
- regulation and supervision of less significant institutions;
- regulation, supervision, oversight, and crisis management of financial market infrastructures;
- cyber risk and financial stability;
- fintech developments and oversight;
- financial safety net and crisis management.

The IMF's assessment of the resilience of the Spanish financial system, particularly the banking sector, was positive. The IMF underscored the deleveraging by households and firms and found that the risks posed by the non-bank financial intermediation sector were moderate because it comprises a small share of the overall financial system. The main risks to financial stability in Spain (summarised in Table 1) are associated with an abrupt, significant slowdown in growth alongside a material, further tightening in financial conditions, including higher interest rates and risk premia and downward pressure on real estate valuations. That said, the IMF's stress tests revealed the banking sector's resilience in the aggregate under the adverse stress test scenario, albeit with significant credit deleveraging.

As usual in FSAPs, the IMF made a series of recommendations to the Spanish authorities to comply with over the coming years. The addressees (authorities concerned) and timing (near or medium-term – between one and five years – compliance) of the IMF's FSAP recommendations vary for each area.

As regards macroprudential policy, the IMF recommended developing a framework for setting the countercyclical capital buffer (CCyB) aimed at activating this instrument in

Table 1
FSAP risk assessment matrix

Risk	Relative likelihood	Expected impact
Intensification of regional conflict(s) and geo-economic fragmentation	High	Medium
Abrupt global slowdown or recession that may trigger systemic financial instability	Medium	High
Commodity price volatility	High	Medium
Monetary policy miscalibration	Medium	Medium / High
Weak implementation of fiscal commitments, delays in EU funded projects or reassessment of sovereign risk	Medium	High
Extreme climate events	Medium	Medium
Cyberthreats	Medium	High

SOURCES: IMF and Banco de España.

1 For a more detailed summary of the 2024 Spain FSAP, see "El programa de evaluación del FMI para el sistema financiero español: Una visión general desde una perspectiva de estabilidad financiera". *Revista de Estabilidad Financiera - Banco de España,* 47, otoño (forthcoming).

2 The technical notes forming part of the Spain FSAP are available on the IMF's website.

Table 2
Main IMF recommendations for the Banco de España

Recommendation	Timing (a)
Macroprudential policy framework and tools	
Deploy policies, including but not necessarily limited to, the introduction of a positive neutral countercyclical buffer, to ensure that banks raise capital buffers to be better positioned against downside tail risks	Immediate
Increase the minimum frequency of AMCESFI Council meetings and raise the profile and transparency of AMCESFI by publishing meeting minutes / summaries and timely Annual Reports	Immediate
Review the case for appointing two or three external members to AMCESFI to strengthen the diversity of perspectives and expertise	Immediate
Further develop and deepen the macroprudential framework by addressing remaining data and information gaps, as well as by strengthening reporting requirements	Near term
Systemic risk analysis and monitoring	
Enhance data collection and monitoring of foreign investments in the real estate market	Near term
Create the infrastructure for a more granular cash-flow analysis and report regular stress testing results	Near term
Financial sector oversight	
Ensure alignment of resources of supervisory authorities to current and expected future workload	Immediate
Banking supervision and regulation of less significant institutions	
Streamline the offsite monitoring system and apply proportionality in conducting supervisory review and evaluation processes while performing more frequent and targeted onsite inspections and thematic activities	Immediate
Strengthen Banco de España onsite inspection activities on less significant institutions' governance and risk management, particularly management of liquidity risk and interest rate risk in the banking book	Immediate
Crisis management and financial safety nets	
Establish and operationalise an approach to address liquidity needs in resolution	Immediate
Cyber security risk supervision and oversight	
Conduct onsite examinations as part of financial market infrastructure supervision. Conduct more thematic reviews while maintaining short onsite visits to a sample of less significant institutions. Develop a lighter threat intelligence based red-teaming framework based on TIBER-ES (Threat Intelligence Based Ethical Red-Teaming – Spain) principles	Near term
Regulation, supervision and oversight of financial market infrastructures	
Formalize a cooperation agreement between the Spanish National Securities Market Commission and the Banco de España	Near term
Fintech	
Delegate powers to the Coordination Commission and the regulators to make changes to sandbox operation, streamline administrative processes, and provide greater flexibility to supervisory authorities to use preferred mix of tools	Near term
Financial integrity	
Complement the National Risk Assessment, ensure accuracy of data stored in centralised beneficial ownership register, and extend anti-money laundering and counter terrorist financing risk-based supervisory activities to professional enablers and virtual asset providers	Near term

SOURCES: IMF and devised by authors.

a Immediate (within one year); Near term (within 1-3 years).

normal times for exposures located in Spain. This would strengthen banks' solvency to contend with cyclical systemic risk. The CCyB activation policy recently approved by the Banco de España[3] implements this recommendation.

The IMF also suggests enhancing the governance of the Spanish macroprudential authority (AMCESFI) by raising its transparency, appointing external members and making more information available (see Table 2).

The performance of this FSAP was possible thanks to close institutional collaboration at various levels. Under the general coordination of the Ministry of Economy, Trade and Enterprise (General Secretariat of the Treasury and International Financing), the FSAP brought together the Banco de España, the Spanish National Securities Market Commission, the Directorate General of Insurance and Pension Funds, the Spanish executive resolution authority (FROB), the Deposit Guarantee Scheme and the Executive Service of the Commission for the Prevention of Money Laundering and Monetary Offences (Sepblac), among other authorities. In addition, IMF staff held meetings with European Union bodies tasked with oversight of the Spanish financial system (the European Central Bank (ECB) and the European Systemic Risk Board), as well as with various private sector representatives and academics.

Owing to the importance of the topics discussed, staff members of different functional areas of the Banco de España were involved in all the FSAP lines of work. They provided the information requested by the IMF through questionnaires. Together with the ECB, the Banco de España furnished data for the IMF stress tests and other related quantitative analyses. From a logistics viewpoint, the Banco de España helped organise in its Madrid premises most of the technical work sessions programmed for IMF staff visits to Spain in mid-2023 and early 2024.

The next Spain FSAP will foreseeably be carried out in 2029. The systemic importance that the IMF attaches to the Spanish financial sector means that Spain is included in the group of jurisdictions that are subject to an FSAP every five years. Until then, the IMF will regularly monitor compliance with the recommendations made to the Spanish authorities in the recent FSAP within the context of its next annual IMF Article IV consultations (on national macroeconomic policies).

3 Press release of 1 October 2024,"The Banco de España approves the new framework for setting the countercyclical capital buffer and sets the buffer rate for 2024 Q4 at 0.5%". The recommendation was issued by the IMF shortly before the Banco de España announced, on 16 May 2024, its plan to introduce a positive CCyB rate. The Executive Board of the IMF acknowledged this recent development in its press release "IMF Executive Board Concludes 2024 Article IV Consultation with Spain" of 6 June 2024.

Box 3.3

RECIPROCITY FOR MACROPRUDENTIAL MEASURES IN THE EUROPEAN UNION: THE SYSTEMIC RISK BUFFERS OF PORTUGAL AND ITALY

Under the prudential legislation applicable to credit institutions in the European Union (EU), Member States are authorised to activate a set of macroprudential tools to prevent and mitigate systemic risks to their financial stability. The Banco de España's macroprudential powers and tools are mainly provided for in the Spanish legislation[1] transposing Directive 2013/36/EU (Capital Requirements Directive),[2] in Regulation (EU) No 575/2013 (Capital Requirements Regulation)[3] and also in Royal Decree 102/2019[4] (which, among other matters, implements macroprudential tools specific to Spanish law).

The EU financial system is highly integrated. This means that credit institutions often provide cross-border financial services either directly or through subsidiaries or branches located in another Member State. If the macroprudential measures activated by a Member State are to be effective and free of unintended consequences, they may also need to be applied to the exposures in that Member State held by credit institutions based in other EU countries.

Under certain conditions, the activation of specific tools (e.g. the countercyclical capital buffer) in a given country automatically applies to all EU credit institutions.[5] For other measures, European regulations envisage the possibility of the relevant activating authority requesting that the authorities of other Member States adopt equivalent measures (voluntary reciprocity).

Against this background, the European Systemic Risk Board (ESRB) issued Recommendation 2015/2 on the assessment of cross-border effects and voluntary reciprocity of macroprudential policy measures, to ensure the effectiveness and consistency of macroprudential policy, and to reduce the possibilities of regulatory arbitrage.

To steer decisions by the authorities of other Member States on whether the measures envisaged in a recommendation should be reciprocated, the ESRB has set, on a case-by-case basis, an institution-specific materiality threshold, typically in terms of the volume of exposures to counterparties in the activating country. In accordance with Recommendation ESRB/2015/2, institutions in countries other than the initial activating country may be exempted from applying reciprocating measures if their risk exposure is below this threshold (the *de minimis* principle). This ensures that the principle of proportionality is upheld and avoids unnecessary costs associated with activating macroprudential measures for non-material exposures. If the materiality threshold is exceeded, the authorities of other Member States are expected to reciprocate the measure, unless they can provide a justification for not doing so.

In compliance with Recommendation ESRB/2015/2,[6] the Banco de España analyses on a case-by-case basis each reciprocation request from other Member States. Until this year, in all the cases analysed the Banco de España had found that Spanish banks' exposures to countries requesting reciprocity stood well below the pre-defined materiality thresholds in the corresponding recommendations. In addition, it had not identified any other grounds for reciprocating macroprudential measures and, therefore, the Banco de España had not reciprocated any measures.[7]

This changed recently, after the ESRB issued two reciprocity recommendations in 2024 on measures adopted in Portugal and Italy. In this case, the exposures were material for the Spanish banking system.

Failure to reciprocate the measures could incentivise lending in Portugal and Italy by Spanish credit institutions, as their capital costs would be lower than those of other

1 Law 10/2014 of 26 June 2014 on the regulation, supervision and solvency of credit institutions, Royal Decree 84/2015 of 13 February 2015 implementing Law 10/2014, and Banco de España Circular 2/2016 of 2 February 2016 to credit institutions on supervision and solvency, which completes the adaptation of Spanish law to Directive 2013/36/EU and to Regulation (EU) No 575/2013.

2 Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions.

3 Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and amending Regulation (EU) No 648/2012.

4 Royal Decree 102/2019 of 1 March 2019 creating the Spanish macroprudential authority (AMCESFI), establishing its legal regime and implementing certain aspects relating to macroprudential tools.

5 In the case of the countercyclical capital buffer, the automaticity is actually geographically much broader in scope, as it extends to all countries whose national banking authorities are Basel Committee members.

6 Recommendation 2015/2 of the European Systemic Risk Board of 15 December 2015 on the assessment of cross-border effects of and voluntary reciprocity for macroprudential policy measures.

7 Information on the voluntary reciprocation requests currently in force can be found here.

institutions operating in these countries. In the case of those operating in those countries through subsidiaries, there would be incentives to transfer business to other institutions within their banking group that are not subject to the measure adopted. For instance, they could continue to lend in Portugal and Italy through branches. Institutions without subsidiaries in those two countries might also find this option more appealing. There might also be incentives to reallocate capital to subsidiaries affected by the measure in the activating country.

All this would limit the effectiveness of the measures adopted by Portugal and Italy, giving Spanish banks incentives to channel resources towards these countries, which could have adverse consequences for their financial stability.

Portugal's sectoral systemic risk buffer

In November 2023 the Banco de Portugal, as the national designated authority, announced its intention to introduce a 4% sectoral systemic risk buffer (sSyRB) for credit institutions.[8] This buffer will be applicable to retail exposures to natural persons secured by residential real estate located in Portugal for which the Internal Ratings-Based (IRB) approach is used to calculate the own funds requirements for credit risk. The sSyRB has been applied since 1 October 2024, at the highest level of consolidation for the institutions in Portugal, and will be reviewed at least every two years.

According to the Banco de Portugal, this macroprudential tool has a preventive application, as it aims to increase the resilience of institutions to the potential materialisation of systemic risk that has been observed in the residential real estate sector in Portugal. It will only be applicable to institutions using the IRB approach, as their estimated average risk weight (14%) is significantly smaller than that used under the standardised approach (35% for comparable exposures).

After formally notifying the ESRB of its intention to set this buffer, the Banco de Portugal also requested that it recommend the reciprocation of the measure by other Member States, in view of the systemic nature of the risks identified. The measure applies to five institutions established in Portugal, including two subsidiaries of Spanish banks.[9] The ESRB approved of the measure's adoption, and issued Recommendation ESRB/2023/11.

In response to the Banco de Portugal's request for reciprocation, the ESRB also issued Recommendation ESRB/2023/13,[10] inviting the relevant authorities of other Member States to reciprocate the sSyRB, to set it at the highest level of consolidation for the institutions and to ensure that it applies and is complied with from 1 October 2024. As guidance for the authorities of the other countries, the Recommendation sets an institution-specific materiality threshold of €1 billion. This means that it is considered justifiable for institutions with sectoral exposures below this threshold to be exempted from application of the reciprocal measure.

Overall, the Spanish banking sector's lending to counterparties in Portugal (€85.4 billion) represented 2.4% of its total consolidated assets in June 2024 (see Chart 1), and its loans to Portuguese households secured by residential real estate (€44.6 billion) accounted for 1.3%. Spanish banks use the IRB approach for most of their retail exposures in Portugal (78% as at June 2024, up 5 percentage points (pp) since 2017). These aggregates are indicative of the relevance for Spanish institutions of the macroprudential measure adopted in Portugal, which is borne out by a case-by-case analysis.

Based on the analysis of Spanish institutions' exposures within the scope of Portugal's sSyRB, in May 2024 the Banco de España approved a reciprocal macroprudential measure for institutions exceeding the materiality threshold set by the ESRB.[11] Specifically, the Banco de España decided to set a sSyRB of 4%,[12] applicable from 1 October 2024, for three banks at consolidated level, on their retail exposures to natural persons secured by

8 Banco de Portugal press release "Press release by the Banco de Portugal on the imposition of a capital buffer on exposures secured by residential real estate", of 15 November 2023.

9 Santander Totta - SGPS, S.A. (belonging to the Santander Group) and Banco BPI, S.A. (belonging to the CaixaBank Group).

10 Recommendation of the European Systemic Risk Board of 8 December 2023, amending Recommendation ESRB/2015/2 on the assessment of cross-border effects of and voluntary reciprocity for macroprudential policy measures (ESRB/2015/2).

11 Banco de España press release "The Banco de España resolves to reciprocate a macroprudential measure approved by the Banco de Portugal", of 17 May 2024.

12 See the section on Reciprocity of measures in other countries of the Banco de España website.

Chart 1
Lending by the Spanish banking sector in Portugal by type of loan, and IRB retail exposures as a percentage of total retail exposures in Portugal (a) (b)

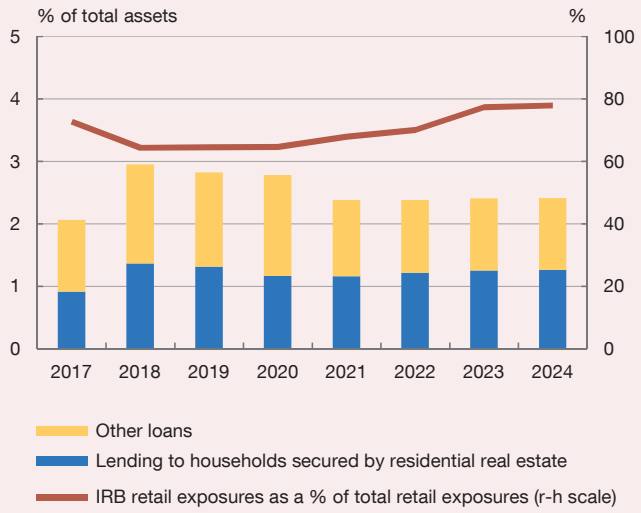
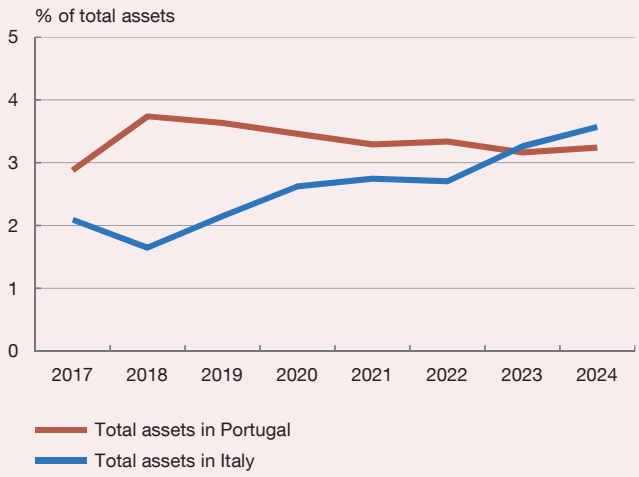


Chart 2
Total assets of the Spanish banking sector in Portugal and Italy



SOURCE: Banco de España.

a "Other loans" includes loans and advances to central banks, general government, credit institutions, other financial institutions, non-financial corporations and consumer credit to households. Data as at June each year.
b "IRB exposures" means exposures to which the internal ratings-based approach is applied to calculate own funds requirements for credit risk. The percentage is calculated on the basis of the original exposures, before applying risk weights. Data as at June each year.

Table 1
Banks subject to the Banco de España's reciprocation of the Portuguese measure

LEI (a)	Institution
5493006QMFDDMYWIAM13	Banco Santander, S.A.
7CUNS533WID6K7DGFI87	CaixaBank, S.A.
VWMYAEQSTOPNV0SUGU82	Bankinter, S.A.

SOURCE: Banco de España.

a Legal Entity Identifier.

residential real estate located in Portugal for which those banks use the IRB approach to calculate their regulatory own funds requirements for credit risk (see Table 1).

Although there is another Spanish institution[13] with significant exposures in Portugal, it is outside the scope of the measure as it uses the standardised approach to calculate its regulatory own funds requirements for credit risk.

The relatively small size of Spanish banks' mortgage exposures in Portugal vis-à-vis their total assets (see Chart 1) suggests that the Banco de España reciprocating the measure will not have a significant impact on lending

13 ABANCA Corporación Bancaria, S.A.

in Spain. The impact on lending in Portugal, however, is likely to be greater, as the Spanish institutions affected have a significant share of this market.

Italy's systemic risk buffer

In April 2024 the Banca d'Italia, as the national designated authority for Italy, announced[14] its intention to introduce a systemic risk buffer (SyRB) for credit institutions. The buffer is applicable to all credit institutions authorised in Italy, both on an individual basis and on a consolidated basis. A SyRB rate of 0.5% will apply from 31 December 2024 to 29 June 2025 to all credit risk exposures and counterparty credit risk exposures in Italy. The rate will increase to 1% from 30 June 2025.

Following a request from the Banca d'Italia, on 11 June 2024 the ESRB issued Recommendation ESRB/2024/2, inviting the relevant authorities of other Member States to reciprocate the SyRB introduced in Italy and to apply it on an individual and on a consolidated basis for the institutions. As guidance for the authorities of the other countries, the Recommendation sets an institution-specific materiality threshold of €25 billion.

In this case, the Banco de España resolved to reciprocate the measure adopted in Italy,[15] taking into account the materiality of Spanish banks' exposures to the Italian market and the grounds for contributing to the effectiveness of the measure in Italy. Thus, it has decided to set a SyRB rate of 0.5% from 31 December 2024 to 29 June 2025 and of 1% from 30 June 2025 onwards for two banks, on both an individual and a consolidated basis, applicable to all credit risk exposures and counterparty credit risk exposures in Italy (see Table 2).

Unlike in Portugal, the Spanish banking sector has consistently increased its exposure to Italy (see Chart 2). Indeed, between June 2017 and June 2024 the percentage of Spanish banks' total assets in Italy rose by 1.5 pp, to 3.6%, while their lending in this country (comprising loans and advances) increased by 1 pp, to 1.6% of total assets. During this period the proportion of their exposures to the public sector remained stable, at an average of 54%.

Table 2
Banks subject to the Banco de España's reciprocation of the Italian measure

LEI (a)	Institution
5493006QMFDDMYWIAM13	Banco Santander, S.A.
K8MS7FD7N5Z2WQ51AZ71	Banco Bilbao Vizcaya Argentaria, S.A.

SOURCE: Banco de España.

a Legal Entity Identifier.

14 Banca d'Italia press release "Activation of the systemic risk buffer", of 26 April 2024.

15 Banco de España press release "The Banco de España resolves to reciprocate a macroprudential measure approved by the Banca d'Italia", of 16 October 2024.

Annex 1

Consolidated balance sheet. Deposit institutions

Assets	Jun-24	Change Jun-24/Jun-23	% of total assets Jun-23	% of total assets Jun-24
	€m	%	%	%
Cash and balances at central banks	381,399	-11.5	10.4	9.1
Loans and advances to credit institutions	302,932	9.7	6.7	7.2
General government	111,238	0.5	2.7	2.7
Other private sectors	2,371,864	1.9	56.1	56.6
Debt securities	628,482	6.6	14.2	15.0
Other equity instruments	41,415	26.4	0.8	1.0
Investments	22,366	3.9	0.5	0.5
Derivatives	128,739	-16.2	3.7	3.1
Tangible assets	56,596	-2.7	1.4	1.3
Other	149,040	1.6	3.5	3.6
Total assets	**4,194,072**	**1.1**	**100.0**	**100.0**
MEMORANDUM ITEMS				
Financing to private sector	2,437,686	1.9	57.7	58.1
Financing to general government	626,888	6.6	14.2	14.9
Total NPLs	83,134	-0.3	2.0	2.0
Total NPL ratio	2.3	-4 (b)		

Liabilities and equity	Jun-24	Change Jun-24/Jun-23	% of total assets Jun-23	% of total assets Jun-24
	€m	%	%	%
Balances from central banks	71,396	-49.4	3.4	1.7
Deposits from credit institutions	2 91,945	-16.2	8.4	7.0
General government	192,690	36.0	3.4	4.6
Other private sectors	2,538,336	4.3	58.7	60.5
Marketable debt securities and subordinated debt	499,835	6.2	11.3	11.9
Derivatives	114,612	-20.7	3.5	2.7
Provisions (including provisions for pensions)	21,330	-4.1	0.5	0.5
Other	188,668	2.8	4.4	4.5
Total liabilities	**3,918,813**	**0.9**	**93.7**	**93.4**
MEMORANDUM ITEM				
Eurosystem net lending (a)	1,781	-98.0	2.1	0.0
Own funds	318,068	4.7	7.3	7.6
Minority interests	11,713	-4.1	0.3	0.3
Valuation adjustments	-54,522	1.1	-1.3	-1.3
Total equity	**275,259**	**5.0**	**6.3**	**6.6**
Total liabilities and equity	**4,194,072**	**1.1**	**100.0**	**100.0**

SOURCE: Banco de España.

a Difference between funds received in liquidity-providing operations and funds delivered in liquidity-absorbing operations. June 2024 data.
b Difference calculated in basis points.

Annex 2

Consolidated income statement. Deposit institutions

	Jun-24		Jun-23	Jun-24
	€m	% change Jun-24/Jun-23	% ATA	% ATA
Interest income	117,864	25.0	4.60	5.64
Interest expense	65,086	35.0	2.35	3.12
Net interest income	52,778	14.5	2.25	2.53
Return on equity instruments	940	7.7	0.04	0.04
Net financial income	53,717	14.4	2.29	2.57
Share of profit or loss of entities accounted for using the equity method	2,127	15.6	0.09	0.10
Net fees and commissions	16,526	9.8	0.73	0.79
Gains and losses on financial assets and liabilities	3,350	32.5	0.12	0.16
Other operating income (net)	-3,537	45.9	-0.12	-0.17
Gross income	72,183	12.9	3.12	3.46
Operating expenses	30,176	7.2	1.37	1.44
Net operating income	42,007	17.3	1.75	2.01
Impairment losses on financial assets	10,976	12.6	0.48	0.53
Other provisioning expense (net)	2,529	33.6	0.09	0.12
Other gains or losses (net)	-1,487	-34.1	-0.11	-0.07
Profit before tax (including discontinued operations)	27,014	23.3	1.07	1.29
Net profit	19,016	21.8	0.76	0.91
MEMORANDUM ITEM				
Profit attributable to the controlling entity	18,219	23.3	0.72	0.87

SOURCE: Banco de España.

BANCO DE ESPAÑA PUBLICATIONS

The Banco de España publishes various types of documents providing information on its activity (economic reports, statistics, research papers, etc.), which can be consulted in the Institutional Repository at https://repositorio.bde.es/?locale=en.

Most of these documents are available in PDF format and can be downloaded free of charge from the Banco de España website at http://www.bde.es/webbde/en/secciones/informes/.

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SYMBOLS AND ABBREVIATIONS

APP	Asset purchase programme
AT1	Additional Tier 1
ATAs	Average total assets
BCBS	Basel Committee on Banking Supervision
BCP	Basel Core Principales
BIS	Bank for International Settlements
BLS	Bank Lending Survey
bn	Billion
bp	Basis points
CBQ	Banco de España Central Balance Sheet Data Office Quarterly Survey
CCR	Banco de España Central Credit Register
CCyB	Countercyclical capital buffer
CET1	Common Equity Tier 1
CGP	Code of Good Practice
CMDI	Crisis Management and Deposit Insurance
CMU	Capital Markets Union
COE	Cost of equity
COVID-19	Coronavirus disease 2019
CPI	Consumer Price Index
CRD	Capital Requirements Directive
CRR	Capital Requirements Regulation
DeFi	Decentralised Finance
DFR	Deposit facility rate
DGS	Deposit Guarantee Scheme
DIs	Deposit institutions
DORA	Digital Operational Resilience Act
EBA	European Banking Authority
EBAE	Encuesta del Banco de España sobre la Actividad Empresarial (Banco de España Business Activity Survey)
EBITDA	Earnings Before Interest, Taxes, Depreciation and Amortisation
ECB	European Central Bank
EEA	European Economic Area
EFF	Encuesta Financiera de las Familias (Spanish Survey of Household Finances)
EPC	Energy performance certificate
ESG	Environmental, social and governance
ESMA	European Securities and Markets Authority
ESRB	European Systemic Risk Board
€STR	Euro short-term rate
ETF	Exchange Traded Fund
EU	European Union
EURIBOR	Euro Interbank Offered Rate
FDIC	Federal Deposit Insurance Corporation
FLESB	Forward-looking exercise on Spanish banks
FOMC	Federal Open Market Committee
FSB	Financial Stability Board
FSR	Financial Stability Report
GAR	Green Asset Ratio
GDP	Gross domestic product
GHG	Greenhouse gas
G-SIBs	Global systemically important banks
G-SIIs	Global systemically important institutions
GVA	Gross value added
H	Half-year
HICP	Harmonised Index of Consumer Prices
HQLAs	High Quality Liquid Assets
ICO	Instituto Oficial de Crédito (Official Credit Institute)
ID	Data obtained from individual financial statements
IGAE	Intervención General de la Administración del Estado (National Audit Office)
IIP	International investment position
IMF	International Monetary Fund
INE	Instituto Nacional de Estadística (National Statistics Institute)
IRB	Internal Ratings-Based
LCCTE	Law 7/2021 on climate change and the energy transition
LCR	Liquidity Coverage Ratio
LGFV	Local government financing vehicle
IRS	Interest-rate swap
LSIs	Less significant institutions
LSTI	Loan service-to-income ratio
LTI	Loan-to-income ratio
LTP	Loan-to-price ratio
LTV	Loan-to-value ratio
m	Million
MiCA	Markets in Crypto-assets Regulation
MREL	Minimum Requirement for own funds and Eligible Liabilities
NBER	National Bureau of Economic Research
NBFI	Non-bank financial intermediation
NDERs	Narrowly defined effective rates
NFCs	Non-financial corporations
NGEU	NextGenerationEU
NPLs	Non-performing loans
NSFR	Net Stable Funding Ratio
OCC	Office of the Comptroller of the Currency
OECD	Organisation for Economic Co-operation and Development
OIS	Overnight Interest Swap
OPEC	Organization of the Petroleum Exporting Countries
OPEC+	Expanded Organization of the Petroleum Exporting Countries
O-SIIs	Other systemically important institutions
OTC	Over-the-counter
PD	Probability of default
PEPP	Pandemic emergency purchase programme
PMI	Purchasing Managers' Index
pp	Percentage points
PRA	Prudential Regulation Authority
Q	Quarter
q-o-q	Quarter-on-quarter
Repo	Repurchase agreement
ROA	Return on assets
ROE	Return on equity
RWAs	Risk-weighted assets
SAFE	Survey on the access to finance of enterprises
SCR	Solvency Capital Requirement
SHSG	Securities Holdings Statistics Group
SIs	Significant institutions
SLIs	Specialised lending institutions
SMEs	Small and medium-sized enterprises
SNP	Senior non-preferred
SOCIMI	Spanish real estate investment trust
SRI	Systemic risk indicator
SRM	Single Resolution Mechanism
SSM	Single Supervisory Mechanism
sSyRB	Sectoral systemic risk buffer
SyRB	Systemic risk buffer
TLTROs	Targeted longer-term refinancing operations
tn	Trillion
VAR	Vector autoregression
WEO	World Economic Outlook
y-o-y	Year-on-year

ISO COUNTRY CODES

AO	Angola
AT	Austria
AU	Australia
BE	Belgium
BG	Bulgaria
BR	Brazil
CA	Canada
CH	Switzerland
CL	Chile
CN	China
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DE	Germany
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RO	Romania
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VN	Vietnam