FINANCIAL STABILITY: MAIN VULNERABILITIES AND RISKS

The level of uncertainty surrounding the macro-financial situation of the global economy and the Spanish economy remains high. Notably, in comparison with the last *Financial Stability Report* (FSR), the risks to financial stability resulting from geopolitical tensions have increased, from their already high level, with the emergence of a new flashpoint in the Middle East.

Also, the weakness of some economies, in particular those of the euro area and China, and expectations that monetary policy will remain restrictive for longer have led to a worsening of the growth outlook and have highlighted the downside risks to the economic scenario. Meanwhile, monetary policy tightening has helped to moderate inflationary pressures in the euro area and other regions and to stabilise the risks posed by high inflation.

Lastly, although the financial markets have returned to normal since the turbulence in March this year, there is still a risk that agents will become more pessimistic about the macro-financial environment and more risk averse. This would have negative consequences for financing conditions (see Figure 1).

With regard to the vulnerabilities identified, those related to high government debt and the financial position of firms and households remain unchanged, while those associated with financial intermediation capacity and the real estate sector have eased.

In this setting, the Spanish banking sector has proved to be resilient. Indeed, its profitability and solvency have performed favourably, non-performing loan (NPL) ratios have continued to decline and the conditions on wholesale bank funding markets have returned to normal. However, with interest rates expected to remain higher for longer, the cost of liabilities, which had been contained, is gradually rising and some deterioration in credit quality can be expected. Under the macroeconomic projections baseline scenario, this would be no obstacle to the organic generation of capital and the maintenance of a sound liquidity position, but the materialisation of the risks identified could give rise to the need to absorb losses. Accordingly, it is still necessary for banks to use the current favourable profitability situation to build up resilience to adverse scenarios.

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

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.

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

SOURCE: Banco de España.

a In this report, **vulnerabilities** are defined as economic and financial conditions that increase the impact or probability of the 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 in this figure are measured using three colours: yellow (low level), orange (medium level) and red (high level). The arrows denote the change in the risks and vulnerabilities since the last FSR.
c The risk of an increase in risk aversion and the possibility that its effects could be amplified by certain financial vulnerabilities has been identified and discussed in past FSRs, specifically as a factor associated with geopolitical risks and risks linked to economic activity and inflation. Macro-financial developments, particularly higher interest rates for longer, prolonged signs of weakening demand and continued uncertainty make it advisable to monitor this risk particularly closely in coming quarters.

R1 Geopolitical risks

Geopolitical tensions continue to pose elevated risks to financial stability. In particular, they continue to have the potential to adversely affect global value chains, essentially through trade in energy and other commodities, and to contribute to sharp falls in the prices of risk-bearing financial assets.

The war in Ukraine, which broke out in 2022, and the recent escalation of tensions in the Middle East are the main sources of uncertainty, although geopolitical risks are global in scope. Thus, greater tensions have also been observed recently in Africa and in the Asia-Pacific region. In Latin America, a particularly important region for Spanish banks, some signs of political instability are also apparent. In addition, the possibility of intensification of cyber attacks globally remains a specific risk.

That said, the resilience in the global economy and international financial markets has been greater than expected following the Russian invasion of Ukraine. In particular, the most adverse scenarios have been avoided in the energy markets, where prices fell markedly from the second half of 2022 until the middle of this year. However, in recent months there have been notable increases in the price of oil,

Chart 1
Natural gas and oil prices (a)

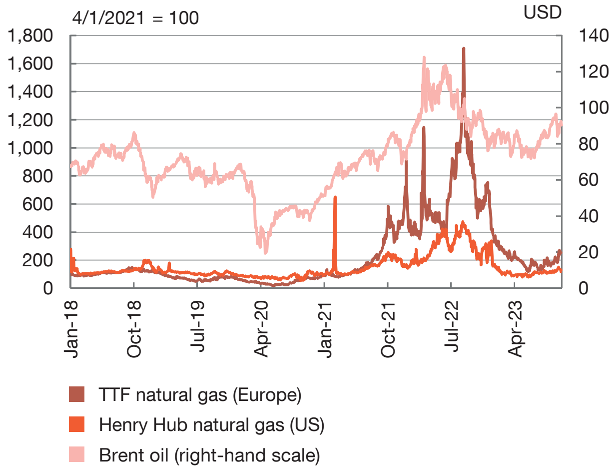
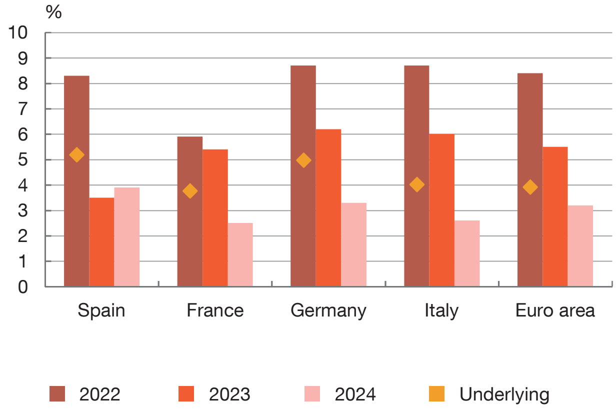


Chart 2
IMF inflation forecasts



SOURCES: Refinitiv and IMF (October 2023 *WEO*).

a Latest observation: 23 October.

driven by OPEC+ production cuts and, more recently, the tensions in the Middle East. Since the beginning of October, these tensions have also pushed up the price of gas on international markets (see Chart 1).

The box accompanying this section analyses in greater detail the potential impact of the situation in the Middle East, through financial market and, especially, energy market channels. The market reaction to date as a result of the current escalation of tensions is assessed and the historical experience of events of this type is reviewed.

In the medium and long term, the risk remains of a divided world order becoming entrenched, which would, at least partly, reverse the efficiency gains obtained from economic and financial globalisation.

R2 Higher and more persistent inflation

The fall in energy prices since the second half of 2022 and the effect of the monetary policy tightening have contained inflation notably in the euro area (see Chart 2) and other regions during 2023.

Looking ahead, the inflation projections anticipate a gradual fall in inflation to around 2% in the medium term, both in the euro area and in Spain, and the risks surrounding these projections are balanced. On one hand, as already indicated, geopolitical factors are an important source of upside risks for the prices of energy and other commodities, such as food, which could give rise to a broader increase in inflationary pressures. Climate factors are also an exogenous source of risk for energy and food

Chart 3
Short-term interest rates forecast. OECD Economic Outlook (a)

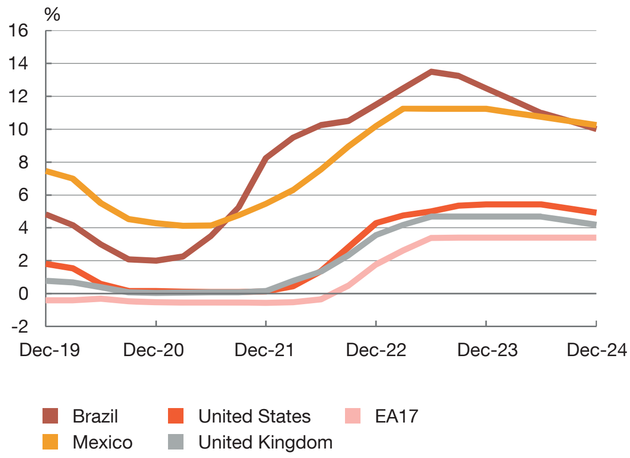
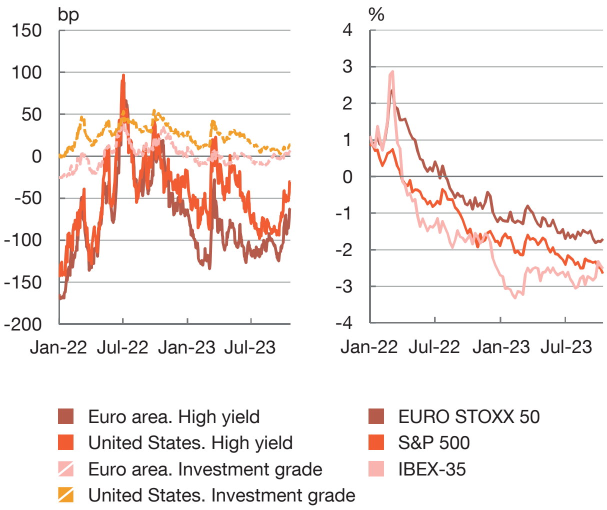


Chart 4
Spreads of NFCs' bonds against the swap curve (l-h panel) (b) and equity risk premium (r-h panel) (c). Deviations from historical average



SOURCES: OECD and Refinitiv Datastream.

a Short-term interest rates forecast refers to projected values of three-month money market rates. Forecast data are calculated by the OECD by making an overall assessment of the economic climate in individual countries and the world economy as a whole, using a combination of model-based analyses and statistical indicator models.
b High yield: ICE Bank of America Merrill Lynch Non-Financial High Yield Index. Investment grade: ICE Bank of America Merrill Lynch Non-Financial Index. The deviations are calculated with respect to the historical average for 1998-2023. The average is 454 bp for euro area high-yield bonds, 446 bp for US high-yield bonds, 78 bp for euro area investment-grade bonds and 131 bp for US investment-grade bonds.
c The equity risk premium is calculated using a two-step dividend discount model. For more details, see Russell J. Fuller and Chi-Cheng Hsia. (1984). "A simplified common stock valuation model". Financial Analysts Journal. The historical averages are calculated for the period 2006-2023. The average is 6.62% for the EURO STOXX 50, 5.00% for the S&P 500 and 7.89% for the IBEX 35.

prices. In addition, a higher than expected increase in wages and profit margins would lead to a larger increase in inflation. On the other hand, the materialisation of downside risks to the growth scenario or a potentially greater monetary-policy impact could give rise to lower than projected inflation.

Against this backdrop, the Governing Council of the European Central Bank (ECB) has indicated that it considers, on the information currently available, that the current level of interest rates, if maintained for a sufficiently long duration, is broadly consistent with reaching the 2% medium-term inflation target. In any case, it continues to stress that it will adjust its monetary policy on the basis of the incoming data to ensure price stability.

Amid global inflationary pressures, the transmission of monetary policy adjustments across regions, through trade and, in particular, financial channels, also needs to be considered. Economic growth in the United States has remained highly robust and recently there has been a slight rise in inflation, so the Federal Reserve System is expected to keep interest rates high, and above those of other advanced economies, for longer (see Chart 3). This contributes to expectations of a more prolonged tightening of global financial conditions, given this country's central position in the international financial system.

As regards the Chinese economy, continuation of its opening up, following the abandonment of the "zero-COVID" policy, which has led to an increase in China's output and in its contribution to global supply, and its weak domestic demand have tended to reduce global inflationary pressures.

The current cycle of interest rate rises in the advanced economies has not led to large capital outflows from the emerging countries, largely because they raised their interest rates early to comparatively high levels, particularly in Latin America (see Chart 3). However, potential additional tightening of global financial market conditions continues to be an important risk to financial stability for these countries.

R3 Greater risk aversion among economic agents

The risk premia on debt securities and equities remain at historically low levels (see Chart 4), despite the increase in the financial burden on agents and an economic outlook characterised by still relatively high inflation and weak growth. The global banking turmoil of March this year led to a slight rise in risk premia, which has since been rapidly and almost completely corrected.

In this setting, there is a risk that an increase in agents' risk aversion[2] may generate even higher borrowing costs and reduce activity, as agents postpone or cut back their consumption or investment plans for precautionary reasons.

This greater risk aversion could be a consequence of there being less funds available to cover financial losses. For example, economic agents whose liquidity reserves decline as a result of a sustained increase in financial costs find that their ability to assume additional increases in these costs or other kinds of shocks has been reduced.

The lower willingness of economic agents to take risk may also stem from a more negative perception of the probability of adverse macro-financial developments. In particular, from greater pessimism over the future course of growth and inflation. The existence of relatively high valuations in the current uncertain environment may make these perceptions more fragile, and lead to a sharper and larger price correction if they become more pessimistic still.

Until now, financial markets have generally adjusted to higher interest rates in an orderly fashion, but the emergence of financial tensions in certain segments may

2 For the purposes of this analysis, the term "risk aversion" is used in its broad sense, i.e. as the reduced willingness of agents to assume risk, owing to a more pessimistic assessment of the future probability of adverse macro-financial scenarios or a lower preference for (or a higher cost of) decisions that may generate losses. A strict definition referring exclusively to agents' preferences has not been applied.

worsen global risk sentiment. This would exert upward pressure on the risk premium of traded financial instruments and would also restrict the supply of bank credit.

Internationally, the increase in risk aversion may tighten financing conditions, especially in emerging countries, beyond the effects of more restrictive monetary policies on risk-free rates. This is particularly relevant for countries, such as Türkiye, in which larger financial vulnerabilities have built up. The change of direction in Türkiye's economic policies has begun to reduce its vulnerabilities, but the adjustment process poses significant challenges, which would increase in the event of a deterioration in global financial conditions.

Vulnerabilities at global level in certain non-bank financial intermediaries and the materialisation of losses on real estate investments, particularly in China, could also amplify these dynamics.

R4 Downside risk to economic growth

Growth in economic activity, both at global level and in the euro area and Spain, has weakened in 2023 to date. In the case of Spain, the growth rates observed in the first two quarters (4.2% and 2.2% year-on-year in 2023 Q1 and Q2, respectively) are significantly higher than those observed for the euro area as a whole (1.1% and 0.6%) and for the other large European economies. That said, a significant loss of

Chart 5
Activity in the euro area, the United States and Spain (a)

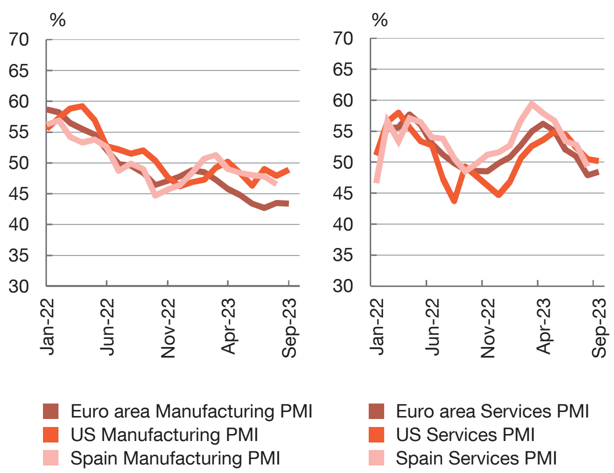
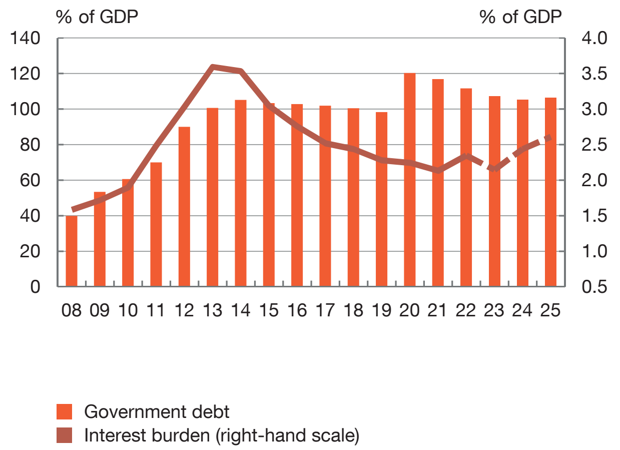


Chart 6
Spanish government debt and associated interest burden (b)



SOURCES: S&P Global, IGAE and Banco de España.

a Latest observation: September 2023 (US and euro area flash estimate) and August 2023 (Spain).
b For 2023-2025 the chart depicts the Banco de España projections published in September 2023. In the case of the government debt-to-GDP ratio, the projections are automatically revised down due to the upward revision to nominal GDP announced by the INE in the same month.

momentum is also observed with respect to 2022. The outlook for activity is tilted towards the downside in various sectors and geographical areas (see Chart 5).

The projections for 2023-2025 envisage average growth for the Spanish economy of around 2%, in a context of upward revision to the flash estimates of GDP for previous years. According to these revisions, Spain had already recovered its pre-pandemic level of activity in 2022. The latest Banco de España projection exercise, however, revised down growth for 2024 and 2025, as a consequence of lower external demand, in a setting of low growth in Europe as a whole, further tightening of financial conditions and higher oil prices.

Should these factors be affected by further negative shocks, the growth slowdown in Spain may be steeper. That would have a negative impact on the income of households and non-financial corporations (NFCs), squeezing their ability to meet their financial obligations in the current high interest rate environment.

The main vulnerabilities[3] of the Spanish economy and financial system include:

V1 High level of government debt

Spain's government debt ratio declined further, to 111.2% of GDP in June 2023, more than 14 percentage points (pp) below its March 2021 peak of 125.3%. Similarly, the budget deficit continued on the downward trend that began in 2021 Q2, to stand at 4.4% of GDP in June 2023 (down from 4.8% in 2022 Q2 and 11.1% in 2021 Q1). The reduction in the government debt ratio was driven exclusively by the growth in nominal GDP, since the growth in interest paid and in the primary deficit would have increased the ratio by more than 11 pp since 2021.

Looking ahead, the Banco de España's projections envisage a gradual decline in the government debt ratio over the coming years, although it would still stand at very high levels in 2025 (around 108%). At the same time, this debt level, coupled with higher financing costs, is set to drive up Spain's public debt burden, which could reach 2.6% of GDP in 2025, up by 0.5 pp on the present figure and by 1 pp on the low recorded in 2008 (see Chart 6).

Indeed, the cost of new government debt issuance was close to 3.6% in September 2023, well above the average for the period 2013-2021 of 0.5%. This mainly owes to the increase in risk-free rates driven by monetary policy tightening, while the risk premium on Spanish government bonds has held stable since end-

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.

2022 at close to 100 basis points (bp), 30 bp higher than the average for 2021, when it reached its lowest ebb since the global financial crisis.

Thus far, the relatively long maturities of existing debt (7.8 years) and the repayment of debt issued at comparatively high interest rates during the sovereign debt crisis have tempered the impact of costlier new issuance on the average cost of public debt.

In this setting, the high level of public debt and the large structural budget deficit remain a significant element of vulnerability for the Spanish economy, particularly in the event of scenarios entailing an abrupt change in market risk sentiment, such as those mentioned above. Furthermore, they reduce the fiscal space to cushion potential shocks to the economy.

Against this backdrop, fiscal policy should fulfil the EU recommendations[4] so as to gradually reduce the country's debt and structural budget deficit. This requires the design and implementation of a programme geared towards lasting fiscal consolidation. Furthermore, making good use of the NGEU funds, which have no direct impact on the budget deficit but do have a positive bearing on economic activity, would also help to lessen the short-term impact on activity of this fiscal consolidation process. Likewise, an ambitious package of structural reforms would help to reduce fiscal imbalances by boosting the economy's potential growth.

V2 Financial weakness of households and firms

Debt ratios continued to decline among NFCs and households in the first half of 2023, by 4.6 pp and 2.4 pp of GDP, respectively, compared with end-2022. However, the percentage of vulnerable agents is expected to rise due to slowing demand and the steadily climbing interest burden.

In the case of NFCs, profit and profitability continued to improve in the first half of 2023.[5] However, some sectors did less well as a result of the negative performance in the manufacture of refined petroleum products and the wholesale fuel trade, which had recorded strong profits in the previous year. The most recent results of the survey on the access to finance of enterprises (SAFE) suggest that SMEs performed less favourably than larger firms.

Further, over the coming quarters NFCs will continue to face profitability risks. Weaker demand will temper profit growth, both through more sluggish turnover and the more limited capacity to pass cost increases through to selling prices. In addition,

4 See the European Council Recommendation on the 2023 National Reform Programme of Spain, 24 May 2023.

5 Based on the Banco de España Central Balance Sheet Data Office Quarterly Survey (CBQ), which collects data from a small sample of firms that are, generally speaking, significantly larger than the Spanish average.

upward pressure on labour and energy input costs would also contribute to less positive developments in terms of profits.

Meanwhile, the gradual increase in the average cost of corporate debt as higher interest rates are passed through, particularly in the cost of bank loans (see Chart 7), which has begun to temper the growth in profit after interest in the first half of 2023, is likely to continue to exert downward pressure on profitability. This despite the mitigating effect provided by the existing long-term, fixed-rate debt that is unaffected by interest rate resets in the near term, in particular debt associated with the ICO loan guarantee facility deployed early in the pandemic. However, it appears that such debt is being repaid at a rapid pace (-21.8% to June 2023).

The cost of corporate funding on wholesale markets climbed further in the first half of 2023, having risen very sharply over the course of 2022, as a result of monetary policy tightening. Corporate risk premia are yet to tighten significantly, but possible increases in risk aversion could exert additional pressure on this component of funding costs.

Overall, therefore, the high financial pressure on some firms remains an element of vulnerability, and one that may intensify as shorter-term debt is renewed. To date, the growth in the proportion of vulnerable firms has been kept in check by healthy profits. However, the downside risks to activity could weaken this favourable factor.

Households, meanwhile, saw their nominal gross disposable income recover by 8% year-on-year in 2023 Q2 (1.7% in the case of real disposable income), helping to mitigate the adverse effects of higher inflation and interest rates on their ability to consume and to meet payment obligations.

Higher interest rates, however, continue to exert upward pressure on indebted households’ interest burden and the average cost of debt. Specifically, the interest burden on mortgage debt has risen for households across all income quintiles (see Chart 8), and the average cost of existing mortgages in August 2023 stood at 3.4%, up 234 bp on end-2021 levels (see Chart 7).

Looking ahead, a greater pass-through of higher interest rates to the cost of existing household debt can be expected, which will contribute to driving up the proportion of indebted households with a high debt burden, despite the increase in early debt repayments made by households in recent months. For instance, it is estimated that interest rates will rise by more than 1 pp on around 30% of variable-rate mortgages over the 12 months after June 2023.

In the face of this increased financial pressure on households, modifying the contractual terms and conditions of their debt could help increase the likelihood of debt collection and mitigate the adverse impacts on consumption. Royal Decree-

Law 19/2022 introduced a raft of measures, not least a reform of the Code of Good Practice (CGP) for the amendment of the terms and conditions on the mortgage loans of vulnerable and potentially vulnerable households. In the first seven months of 2023, the number of applications for measures under the CGPs (over 42,000) was low relative to the total number of existing mortgage loans (accounting for less than 0.4%) and compared with the number of qualifying mortgages, but represented a notable increase on the average number of applications submitted in equivalent periods since the CGP was introduced in 2012. Only a small percentage of the applications made (slightly less than 9%) have led to measures effectively being implemented, although a decision has yet to be given on 50% of applications. Around 40% of applications were rejected, a high percentage of which because they did not qualify for objective reasons. Similarly, there has been no significant increase in the total volume of forborne household loans outside the scope of the codes.

When assessing the number of applications made and measures implemented, it should be borne in mind that only a short amount of time has elapsed since the new CGP entered into force at the start of the year. Moreover, households' servicing capacity appears to have been sustained by the resilience in employment and income. Modifying mortgage terms and conditions, whether under the CGPs or otherwise, entails costs for households to the extent it calls for an additional financing effort. In general, therefore, households have incentives to only use these options when they have liquidity problems for which there is no alternative solution. In any event, how these measures evolve will need to be closely monitored in line with the macro-financial setting.

V3 Weaknesses in the financial sector's intermediation capacity

The profits of the Spanish banking sector once again performed favourably in 2023 H1. Return on assets (ROA) and return on equity (ROE) stood at 0.8% and 12.1%, respectively, in June 2023, 15 bp and 200 bp higher than at end-2022.

The rise in interest rates has continued to drive up banks' revenue more than it has their financing costs, and the consequent growth in net interest income was again the factor that most contributed to profitability in 2023 H1 (see Chart 9). These positive developments in net interest income have more than offset the adverse change in operating costs in the current inflationary environment, the rise in impairment charges (concentrated in business abroad) and the impact of the extraordinary levy on banks' business in Spain.

The Spanish banking sector's comfortable liquidity position and the negative rates from which the present rate hike cycle began in 2022 have helped to contain the cost of liabilities, particularly bank deposits (see Chart 7). However, policy rate hikes passed through more strongly to average bank deposit rates in 2023 H1, and the

Chart 7
Increase in interest rates on loans and deposits (a)

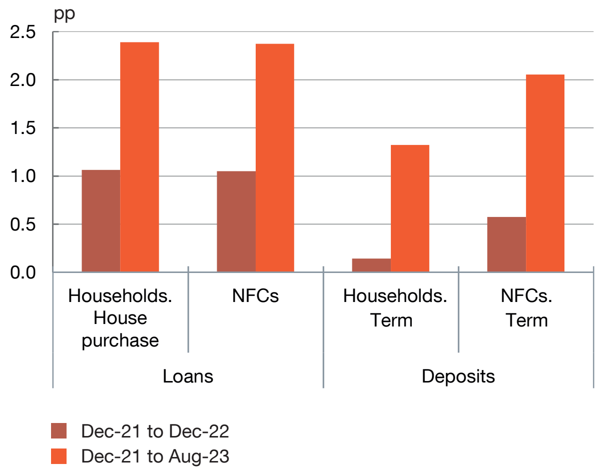
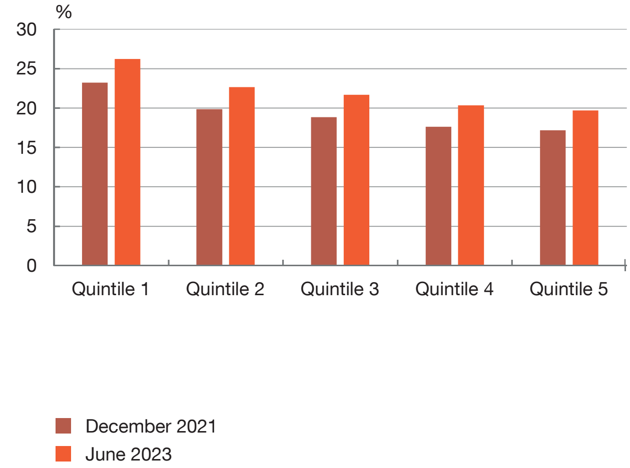


Chart 8
LSTI ratio. Stock of mortgage loans at each date. By income quintile (b)



SOURCES: INE and Banco de España.

a Cumulative change (in pp) in the interest rate used in loan and deposit transactions in the reference period.
b The chart shows the loan service-to-income (LSTI) ratio of existing mortgages for two dates (December 2021 and June 2023) and in each income quintile. The LSTI ratio shows the relationship between the annual mortgage servicing cost and household income (proxied using average gross annual household income in the same postcode). The values shown correspond to the average LSTI ratio in each quintile, weighted by the outstanding loan amount to represent more precisely the LSTI ratio for total outstanding credit. Data for household income broken down by postcode are not available for recent years. Therefore, the present values are calculated taking the latest income data and based on changes in the average net income per household in the INE's Living Conditions Survey.

contribution of other financial liability categories to interest expenses also increased. As a percentage of total liabilities, these expenses have risen by 114 bp in annualised terms since December 2022, to stand at 2.3%.

Meanwhile, the progress in the phasing-out of the Eurosystem's Targeted Longer Term Refinancing Operations (TLTRO)[6] is prompting a slight shift in the composition of liabilities towards funds from financial intermediaries, particularly in the form of interbank loans. As regards deposits from households and firms, these saw moderate growth at consolidated level but began to decrease in business in Spain, posting year-on-year growth of 1.3% and -1%, respectively, in June 2023.

Following the initial impact of the financial turmoil in March, the market conditions for European banks have largely returned to normal. For instance, there has been a notable recovery in debt issuance since May, which will foreseeably enable Spanish banks to comfortably fulfil their funding plans for this year and comply with resolution requirements.

The stock prices of Spanish banks have largely recovered, after losing close to 20% of their value as a result of the collapse of Silicon Valley Bank (SVB) and Credit

6 These Eurosystem operations provide long-term funding to credit institutions on favourable terms to stimulate lending to the real economy. The first TLTRO programme was launched in 2014, and the last programme (TLTRO-III) was launched in 2019 and is expected to be repaid in full in 2024.

Chart 9
Breakdown of the change in profit.
Consolidated net profit as a percentage of ATAs (a)

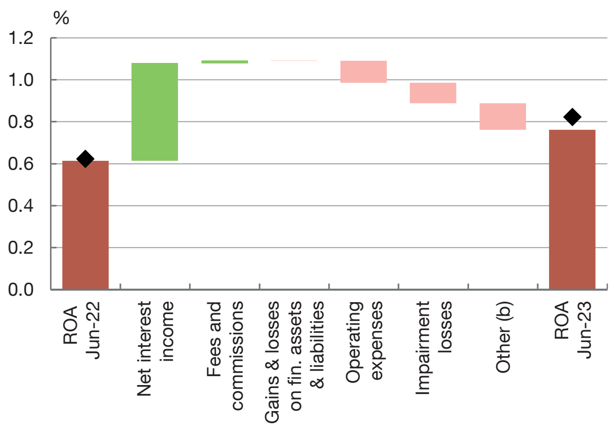
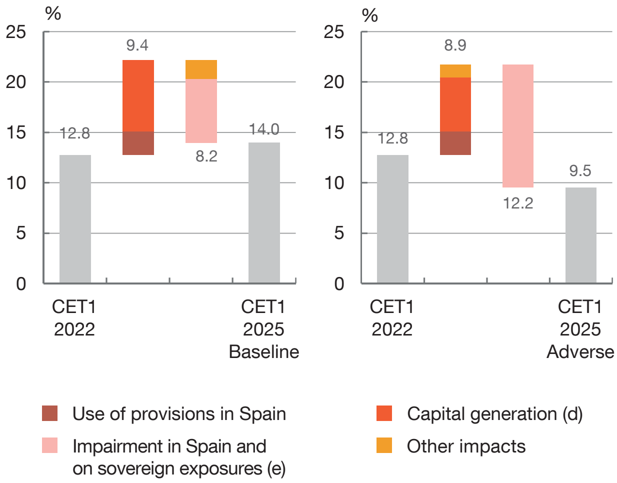


Chart 10
FLESB stress tests. Impact on CET1 ratio under baseline scenario (l-h panel) and adverse scenario (r-h panel) (c)



SOURCE: Banco de España.

a The red (green) colour of the bars denotes a negative (positive) contribution of the corresponding item to the change in consolidated profit in June 2023 compared with June 2022. The black diamonds denote the ROA excluding extraordinary losses in June 2022 from the purchase of offices by a bank (-€0.2 billion) and the impact of the 2023 temporary levy on the banking sector in June 2023 (-€1.3 billion).
b Includes, among other items, the extraordinary losses and temporary levy on the banking sector mentioned in the previous note.
c The figures above (below) the bars denote the net effect of positive (negative) flows. The initial and final CET1 ratios are presented fully-loaded. Other impacts include the change in RWAs between 2022 and 2025 and the effect of the ICO guarantees. Aggregate results, including banks directly supervised by the SSM and the Banco de España.
d This variable includes net operating income in Spain and net income attributable to business abroad. Thus, the capital generated by the banking group overall is compared with the impairment losses in Spain and sovereign losses which are the focus of these tests.
e This variable shows the projection over the three years of the exercise of gross impairment losses on the credit portfolio for exposures in Spain and other types of losses (associated with the fixed-income portfolio, foreclosure management and the sovereign portfolio).

Suisse, but they remain 6.2% below their level prior to 8 March 2023[7] (-9.2% in the case of euro area banks).

In parallel to these funding source adjustments, Spanish banks have maintained a sound liquidity position, presenting a liquidity coverage ratio (LCR) and net stable funding ratio (NSFR) of 176.9% and 131.1%, respectively (above the minimum requirement of 100% in both cases).

Nevertheless, the LCR has decreased by 28.7 pp from its June 2022 level of 205.6%. This appears to be linked to the decline in deposits at central banks (where part of the low-cost financing these had provided was held as liquidity reserves) and is in line with expectations in view of the higher cost of such funding and the incentives to reduce its use.

Against this backdrop, Spanish banks also managed to raise their CET1 capital ratio by 25 bp year-on-year, to 13.1% at June 2023.

7 On 8 March SVB announced significant sales of its financial instruments and additional distress sales. This led to a major bank run on 9 March and the bank's failure on 10 March, triggering a global correction in bank stock prices.

Despite this good recent performance, the materialisation of the macro-financial risks identified in this report may have a significant negative impact on the banking sector. The stress test tools are extremely useful to assess this impact.

The results of the stress test exercise coordinated by the EBA, published in July, show that the European banking sector overall is resilient under an adverse scenario characterised by a severe downturn and further increases in inflation and interest rates. Under that scenario, the aggregate CET1 ratio remains at 10.4% in 2025, after absorbing a negative impact of 459 bp. The eight Spanish significant institutions taking part in the exercise post an aggregate CET1 ratio of 10%, similar to the European average, at end-2025, with a lower impact (240 bp) that counters their lower initial CET1 ratio (12.4%, compared with a European average of 15%).

The Banco de España's top-down stress test exercise[8] uses the EBA's adverse scenario, together with additional hypotheses of stressed credit quality in certain business sectors, owing to the uncertainty created by the accumulation of extraordinary shocks in the period 2020-2022. It also covers a broader sample of significant and less significant institutions. Using this alternative methodology, the results likewise show high overall resilience, despite the additional stress applied to credit risk, with the CET1 capital ratio down to 9.5% at the end of the exercise, a decline of almost 330 bp (see Chart 10). Without this additional stress, the results would be similar to those obtained in the EBA exercise.

In any event, the results of the stress tests show a certain degree of heterogeneity across banks and the possible effects of a high macro-financial risk environment must be closely monitored.

While focus is mainly given to the stress test results under the adverse scenario, those obtained under the baseline scenario can be used as an indicator of the expected solvency of the banking sector provided there are no major deviations from the macroeconomic projections. The results show that, despite the rise in interest rates, the projected continued growth and the financial positioning of the banking sector allow for organic capital growth in the period 2023-2025. In particular, in the Banco de Espana's stress test, and in accordance with the September 2023 projections, the CET1 ratio could grow by almost 140 bp over that period.

Meanwhile, global concerns persist regarding the vulnerabilities in the non-bank financial intermediation segment, especially as regards tight liquidity positions and high leverage. By sector, open-end investment funds show most signs of vulnerability.

8 The Banco de España's stress text exercise (the Forward Looking Exercise on Spanish Banks, FLESB) is based on regulatory and supervisory reporting and on banks' own estimates, drawing on their different risk models and financial performance. The EBA coordinates a bottom-up exercise with constraints, in which the banks themselves estimate the results of the exercise, subject to certain methodological constraints and outlier testing and using supervisory top-down models.

Chart 11
Residential real estate indicators (a)

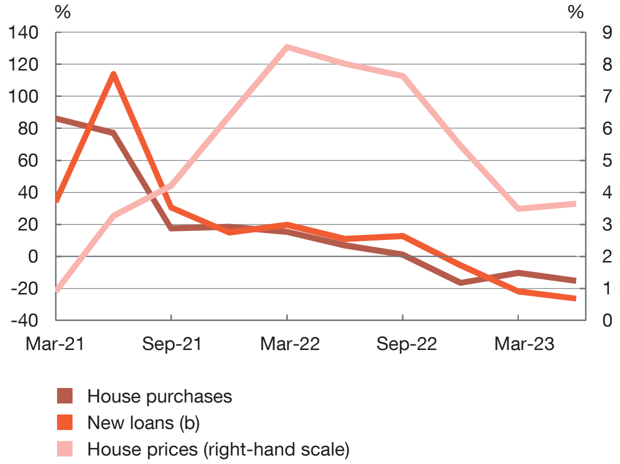
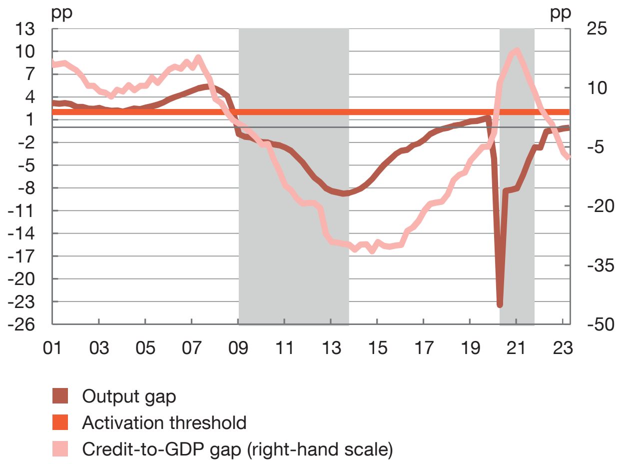


Chart 12
Credit-to-GDP gap and output gap (c)



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

a Year-on-year rates of change based on seasonally adjusted series.
b Rate of change on volume of credit granted in each quarter.
c 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 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. Data available up to June 2023. The grey shaded areas show two financial crisis periods identified in Spain since 2009: the systemic banking crisis (2009 Q1 to 2013 Q4) and the crisis triggered by the COVID-19 pandemic (2020 Q1 to 2021 Q4). The orange horizontal line denotes the reference threshold for activation of the CCyB, equal to 2 pp for the credit-to-GDP gap.

As indicated in previous editions of this report, were the risks identified to materialise, the response of these funds could trigger a spiral of highly discounted asset sales, which would lead to further tightening of financing conditions in the banking sector, and to a potential reduction in the value of its holdings of marketable financial instruments.

Real estate market

On this occasion, the build-up of real estate imbalances, some incipient signs of which were observed in 2022, has been excluded from the list of vulnerabilities.

The contraction both in activity and credit on the housing market, which began in 2022 Q3, has continued so far in 2023. In particular, the volume of house purchases declined by 15% year-on-year in 2023 Q2 (compared with a fall of 10% in 2022 Q4), while new residential mortgage loans showed a more marked drop of 26.3% (compared with a decrease of 5.5% in 2022 Q4). In consequence, more houses have been sold without a mortgage than with one. That said, both the volume of house purchases and new mortgage loans are still above their pre-pandemic levels.

House price growth headed up again in 2023 Q2, interrupting the downward trend of the previous 12 months. Specifically, the year-on-year rate of growth stood at 3.6%

in June 2023 (see Chart 11), somewhat higher than headline inflation. In consequence, close monitoring of this indicator is needed especially in the case of new housing, to assess the persistence of this behaviour.

In this setting in which the previous expansionary pattern of the housing market is correcting, indicators of house price imbalances remain close to neutral, so far with no signs of any easing of credit mortgage standards and conditions.

Macroprudential stance

The Banco de España's macroprudential policy stance remains heavily influenced by the uncertainty surrounding macro-financial developments. Moreover, the credit-to-GDP gap continues to narrow – driven by the contractionary behaviour of credit and by nominal GDP growth – and on the latest data available is now in negative territory, farther from the activation threshold than it was six months ago (see Chart 12). In turn, the output gap has moved closer to positive values, in a setting in which activity has continued to grow so far in 2023 and inflationary pressures persist.

Consequently, the countercyclical capital buffer rate currently remains at 0% and no other macroprudential measures have been activated. As described in detail in Chapter 3, the impact of the ECB's revised floor methodology for other systemically important institutions (O-SIIs) has been passed through to capital requirements in the Spanish banking sector, giving rise to an increase of 25 bp in the minimum buffer rates required of Spain's two most systemically important institutions.