3

SYSTEMIC RISK AND PRUDENTIAL POLICY

Contemporaneous indicators of financial stress have held at very low levels as a result of the favourable conditions observed on the financial markets in recent months. Meanwhile, the Spanish credit-to-GDP gap has remained at negative values, although its downward trend slowed in 2023 Q4. No warning signals are discernible either in the other complementary indicators used to calibrate the countercyclical capital buffer (CCyB). These developments are consistent with the absence of cyclical imbalances in the financial system and the Spanish economy. Accordingly, and bearing in mind that the backdrop is still marked by high uncertainty, the CCyB rate has so far been maintained at 0%.

In the real estate sector, housing loans continue to contract, and the credit standards relating to borrower income and collateral value remain stable at historically demanding levels. However, the latest data point to an easing in the decline of such credit. Moreover, house price growth has held on an upward path since 2023 Q2, meaning that further close monitoring of this sector is needed.

The recent regulatory and supervisory developments notably include the technical amendments to the Basel III global standards on the treatment of crypto-assets, interest rate risk and the disclosure of climate-related financial risks, the latter of which has also been the focus of recent work by the European Banking Authority (EBA). Two notable areas of work for the European Systemic Risk Board (ESRB) in recent quarters have been the macroprudential policy strategy for climate-related risks and the overall macroprudential stance assessment. Meanwhile, the European Commission has resumed its review of the macroprudential framework for the banking sector, publishing a report identifying various potential reform areas and the next steps to be taken before any potential draft legislative proposal.

3.1 Analysis of risk indicators and systemic vulnerabilities

After declining in 2023, the estimated probability of default of European listed firms increased slightly in Q4. Coinciding with the tensions triggered by Russia launching its invasion of Ukraine, this metric rose in the first three quarters of 2022, but it went on to follow a downward trend, which came to an end in 2023 Q4. The ensuing increase has been accompanied by a slight rise in stock price volatility, and is proving sharper in the financial sector, services and construction. Nevertheless, the estimated probability of default in 2022-2023 remains at much lower levels than at the outset of the COVID-19 pandemic (see Chart 3.1.a).[1]

1 The method used to estimate probability of default, described in Box 3.1 of the Spring 2021 *Financial Stability Report* (FSR), has recently been refined, thus improving convergence in the numerical method used. As a result, the estimates are now somewhat lower than those published in the Spring 2023 FSR, which mainly affects the 10th-90th percentile range presented.

The estimated probability of default of Spanish firms has been lower than the European average since end-2021. This owes mainly to a relative improvement in the probability of default of Spanish non-financial corporations as, on average, the country's financial institutions have followed a path more closely in line with that of their European counterparts.

Systemic stress in the financial markets has continued to ease. The Banco de España's systemic risk indicator (SRI), which draws on information from Spain's financial markets,[2] saw its last marked rise in the spring of 2023, at the time of the banking sector turmoil in the United States and Switzerland. It has since trended downwards and currently stands at very low levels, similar to those before the war in Ukraine began (see Chart 3.1.b). The four financial segments used to calculate the SRI indicate that tensions are easing, and are doing so slightly more in the equity market.

The systemic risk indicator for banks (SRISK)[3] remains at low levels, mainly on account of favourable conditions in the financial markets. There is, however, some cross-country heterogeneity. Thus, despite this indicator remaining below its pre-pandemic level, its value is currently higher for Spanish banks than for those in the EU as a whole (see Chart 3.1.c). Further, while the median SRISK rose slightly for Spanish banks at end-2023, it declined in the EU as a whole. This gap 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.

By contrast, the funding liquidity risk indicator remains at high levels. This composite indicator of the Banco de España summarises information on three key risk dimensions: collateral value and availability, the volume of redemptions and rollover costs.[4] The data indicate that the rollover cost has been the largest contributor to the deterioration in this indicator since early 2023, as it is the dimension most directly impacted by the effect of the interest rate hikes (see Chart 3.2). If the expectations of interest rate cuts are borne out, this indicator will likely ease more. Moreover, redemption risk (in particular, for deposits) was the main driver of the increases in the indicator during 2023 H1, but it subsequently fell back to a lower level.

The decline in the credit-to-GDP gap slowed in 2023 Q4. This was attributable to both an easing in GDP growth during 2023 and the ongoing downward correction of the statistical

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2 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 FSR.

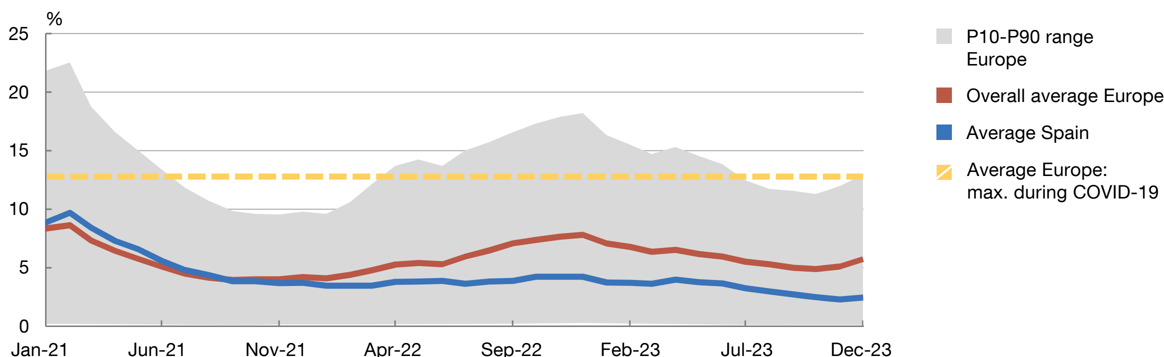
3 Christian Brownlees and Robert F. Engle (2017) "*SRISK: a conditional capital shortfall measure of systemic risk*". *The Review of Financial Studies,* 30, pp. 48-79. This indicator measures the market value of the regulatory capital shortfall of an individual bank or the banking sector overall following 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.

4 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.

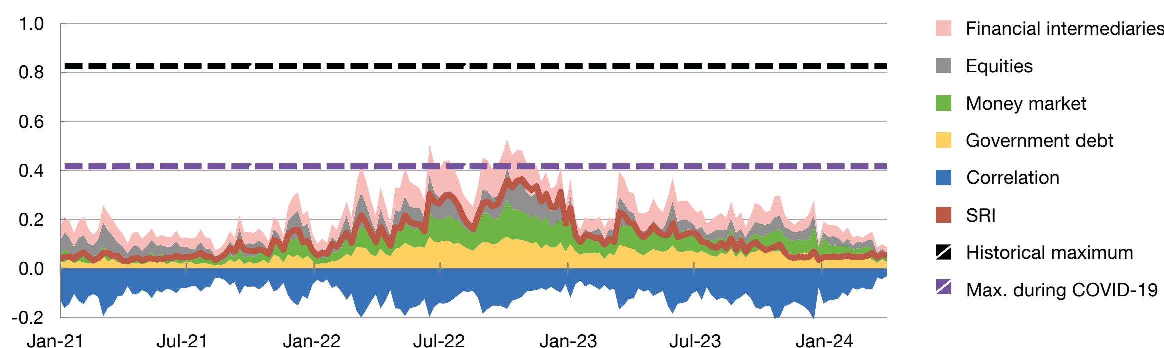
Chart 3.1

The indicators of systemic risks in the financial markets are at very low levels

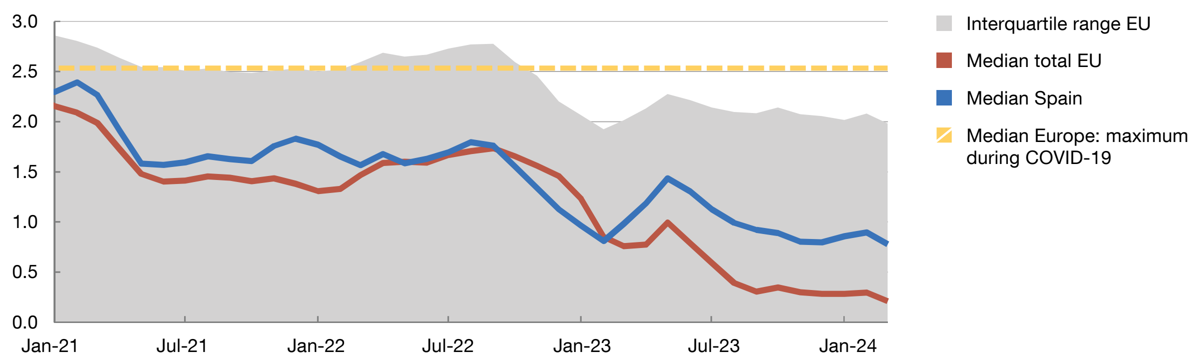
3.1.a Distribution of implied probability of default of European listed firms. Percentile range and averages for Europe and Spain (a)



3.1.b Systemic risk indicator (b)



3.1.c SRISK systemic risk indicator distribution (c)



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

a Probability of default estimated on the basis of the Merton valuation model; see Box 3.1 of the Spring 2021 FSR. The firms considered are those listed on the EURO STOXX 600 index as at December 2023. The sample totals 513 firms (including 24 Spanish firms) with the available information required to perform the exercise's calculations. The series have been smoothed using a three-month moving average. The 90th percentile of European firms reached a maximum value of 38% during the COVID-19 pandemic. Data updated as at 31 December 2023.

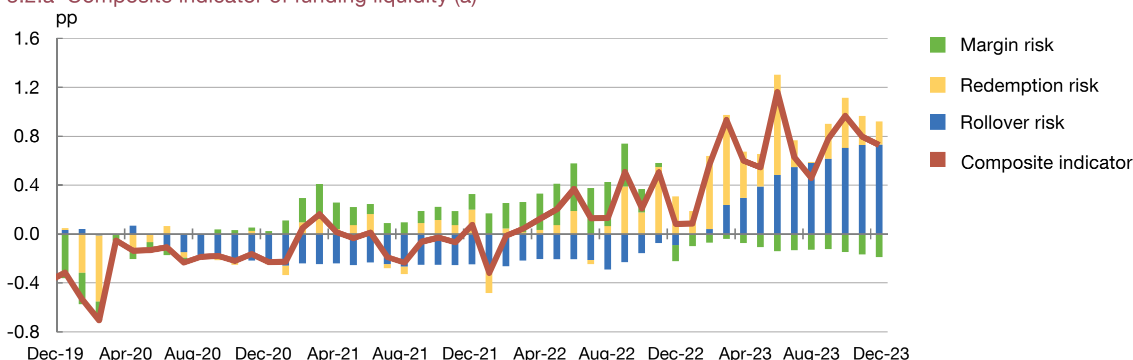
b The systemic risk indicator (SRI) aggregates 12 individual stress indicators (including volatilities, interest rate spreads and maximum historical losses) from four segments of the Spanish financial system. The effect of cross-correlations is taken into account to calculate the SRI, such that it registers higher values when the correlation between the four 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 3 April 2024.

c The SRISK indicator is expressed as a percentage of each bank's total assets. The parameters used are 4.5% for capital requirements, 10% for the decline in the European equities index and 22 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 Q1 is calculated based on 2023 Q4 assets and liabilities values, drawing on the stock price data of the corresponding month. The 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 31 March 2024.

Chart 3.2

Funding liquidity risk is still under pressure owing to the higher rollover cost for short-term operations

3.2.a Composite indicator of funding liquidity (a)



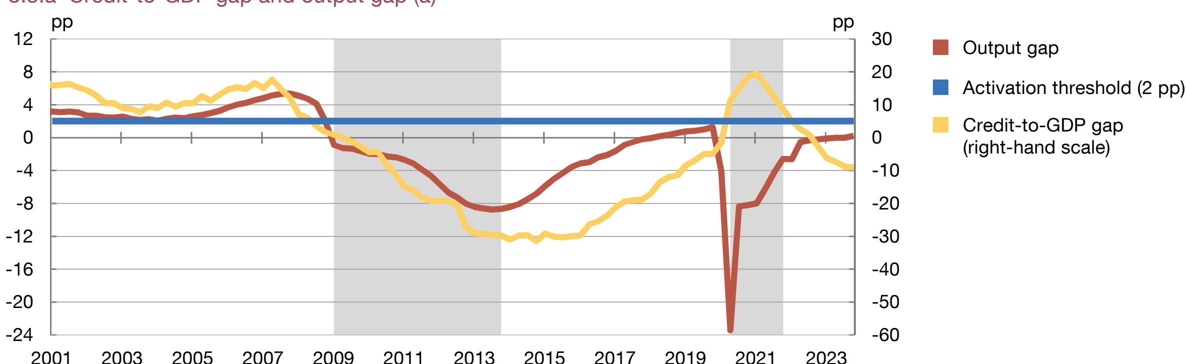
SOURCE: Banco de España.

a The funding liquidity index draws on thirteen 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 December 2023.

Chart 3.3

The downward trend in the credit-to-GDP gap has slowed, while the output gap is holding close to the equilibrium

3.3.a Credit-to-GDP gap and output gap (a)



SOURCES: Banco de España and INE.

a 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. Data available up to December 2023. 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 horizontal line denotes the reference threshold for activation of the CCyB, equal to 2 pp for the credit-to-GDP gap.

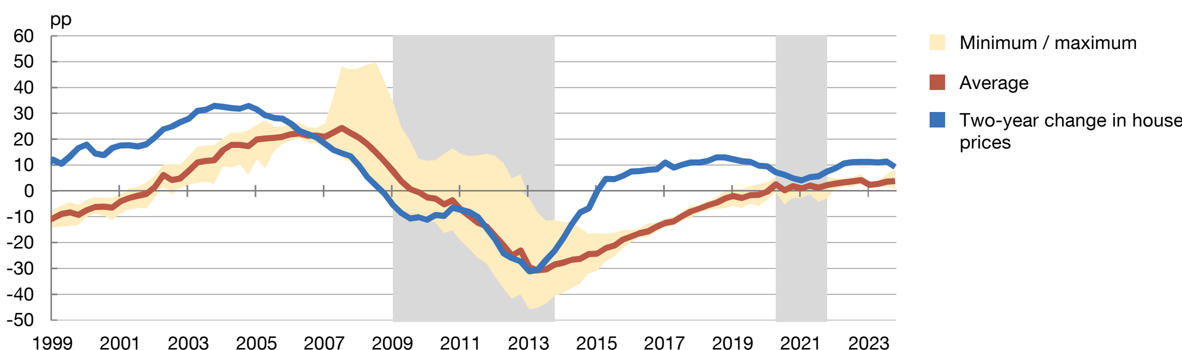
trend that estimates the equilibrium level of the credit-to-GDP ratio.[5] This gap is in negative territory and far from the 2 percentage point (pp) reference threshold that signals the possible existence of credit cycle imbalances (see Chart 3.3). Meanwhile, the output gap, which

5 The estimated trend corresponds to the moving average of the credit-to-GDP ratio over the past ten years. Consequently, its quarterly update entails including data that are far lower than the average for these ten years, owing to the intense deleveraging process observed in Spain in the wake of the global financial crisis.

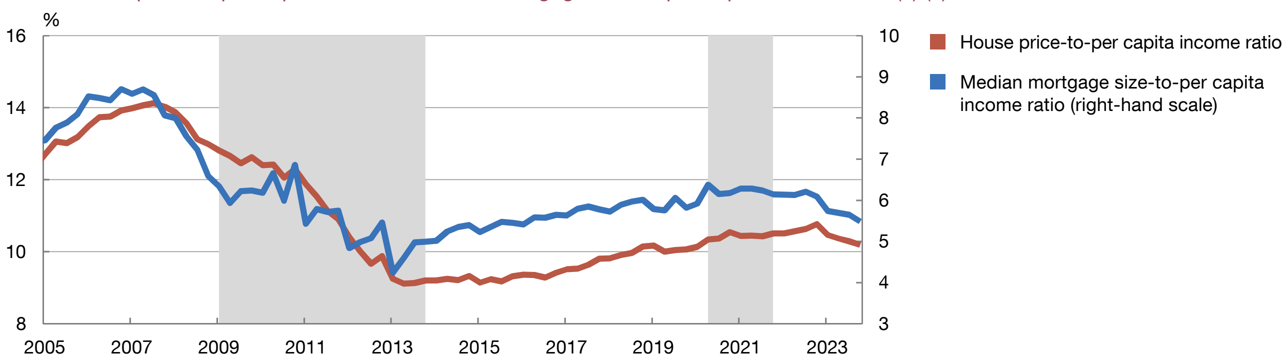
Chart 3.4

The indicators of house price imbalances rose slightly in 2023, despite being dampened by the growth in per capita income

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



3.4.b House price-to-per capita income ratio and mortgage size-to-per capita income ratio (a) (c)



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 December 2023.

b The yellow 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.

c House prices calculated based on price per square metre in the current quarter. All magnitudes are expressed in real terms. The definition of per capita income refers to disposable income.

measures the difference between the actual level of economic activity and its potential growth, is hovering at values very close to the equilibrium. In particular, it turned positive in December 2023, after holding at marginally negative levels throughout the rest of the year.

Nor do the indicators for monitoring sectoral credit cycles show signs of imbalance.[6] Almost all the indicators of sectoral imbalances have eased, thanks to the favourable developments in household income and the gross value added of activities. The intensity of consumer credit to households continues to increase, albeit at a slower pace than in previous quarters.

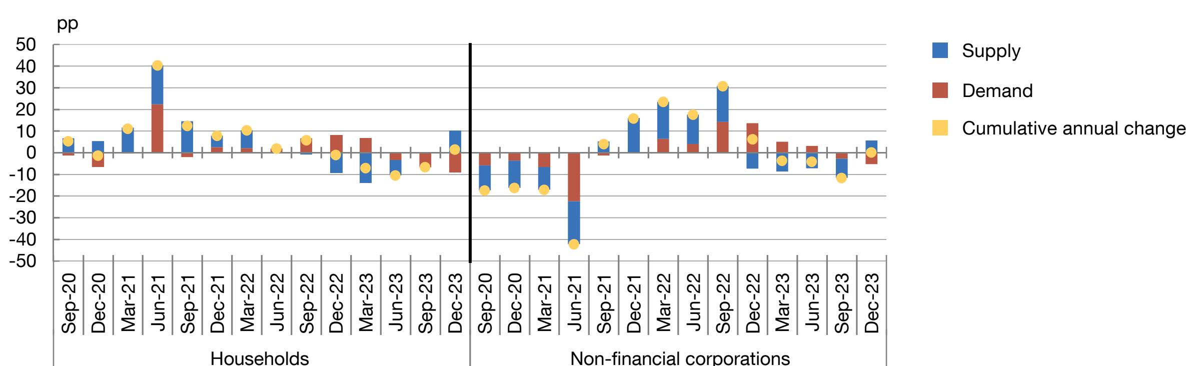
The indicators of house price imbalances rose in 2023 H2, owing mainly to price growth (see Chart 3.4.a). However, the rise in income has prevented a sharper increase in these

6 For a detailed description of the indicators used to monitor sectoral credit cycles, see C. Broto, E. Cáceres and M. 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 3.5

New lending to non-financial corporations and households stabilised at end-2023, with supply and demand factors operating in opposite directions

3.5.a Macroeconomic decomposition of new lending to households and non-financial corporations, by supply and demand 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.

indicators. Indeed, thanks to the strong performance of income, the ratios of prices and median mortgage amounts to per capita income decreased in 2023, thus interrupting the upward trend that had previously been observed in these ratios (see Chart 3.4.b). Nevertheless, the relative performance of house prices and household income will need to be carefully monitored in future quarters.

Against a backdrop of higher interest rates, the granular analysis of the financial position of firms in the construction and real estate activities sectors is also important. As a whole, such firms – whose systemic importance has decreased substantially since the global financial crisis – show financial resilience to some degree of adverse shock to interest rates or their ability to generate gross profits. However, a certain proportion of them are in a more vulnerable position (see Box 3.1).

Positive supply factors helped to stabilise growth in new loans to households and non-financial corporations in 2023 Q4, leaving behind the negative trend observed in the first three quarters of the year. According to the econometric models developed by the Banco de España to decompose credit growth into supply and demand factors, these operated in opposite directions in 2023 Q4 (see Chart 3.5).[7] Thus, in contrast to previous quarters, supply factors have had a positive impact on new loans to non-financial corporations and households, as reflected by the narrowing of loan-deposit spreads in recent quarters. Meanwhile, demand factors have continued to contribute negatively, owing to the high level of

7 Box 3.1 of the Autumn 2023 FSR of the Banco de España.

interest rates. The trends in these results are largely in line with those observed in the Bank Lending Survey (BLS) in 2023 Q4, which finds that the tightening observed in previous quarters in the credit standards and terms and conditions on new loans has eased, while demand, particularly among households, continues to contract.[8]

Interest rate spreads[9] have widened for new loans to non-financial corporations and, albeit more moderately, for new mortgages to households (see Chart 3.6.a). After narrowing in 2022, spreads on new loans to non-financial corporations widened throughout 2023. Meanwhile, spreads on new mortgage loans to households widened slightly in 2023 H1, and continued to widen in H2. The relative weight of fixed-rate mortgages in the total volume of new mortgage loans declined by 11.5 pp year-on-year, from 66.2% in 2022 Q4 to 54.7% in 2023 Q4.

Loan maturities for new mortgages to households and lending to non-financial corporations have shortened slightly (see Chart 3.6.b). In 2023, the relative weight of mortgage loans granted with maturities of over 30 years declined with respect to 2022, while the share of those with maturities of between 20 and 30 years mainly increased. As regards loans to non-financial corporations, the share of those with a maturity of up to one year increased, while that of loans with maturities of between one and five years decreased, and the weight of loans maturing after more than five years remained mostly unchanged.

The leverage of new mortgage loans declined moderately in 2023. The average loan-to-value (LTV) ratio for new mortgages arranged with households fell by 2.3 pp year-on-year in 2023, to 65.8% at year-end. Moreover, the portion of new mortgage loans with an LTV ratio higher than 80% stood at 9.3% in 2023, somewhat lower than in the previous two years (see Chart 3.7). The share of house purchases financed with mortgage credit stood at 44.7% in December 2023, higher than the 43.3% recorded in June 2023, but still lower than the 46.1% observed at end-2022.

The ratio between the amount of new mortgages and households' income is also stable, but their debt burden has increased. Consequently, the loan-to-income (LTI) ratio remains almost unchanged from previous years. Meanwhile, the debt burden – as measured by the loan service-to-income (LSTI) ratio – continued to climb in 2023, to an average of 21.7%, as a result of the interest rate hikes. However, the percentage of new mortgages with an LSTI ratio of over 30% is slightly lower than in the previous two years.[10] The LSTI ratio may begin to decline over the coming quarters, given the recent developments and expected trend in the EURIBOR, a benchmark for the bulk of variable-rate mortgages.

8 Nota de Prensa of the Banco de España (available only in Spanish) on the results of the 2023 Q4 BLS, Banco de España, of 23 January 2024. For the BLS data at European level (which include the Spanish data), see Euro area bank lending survey.

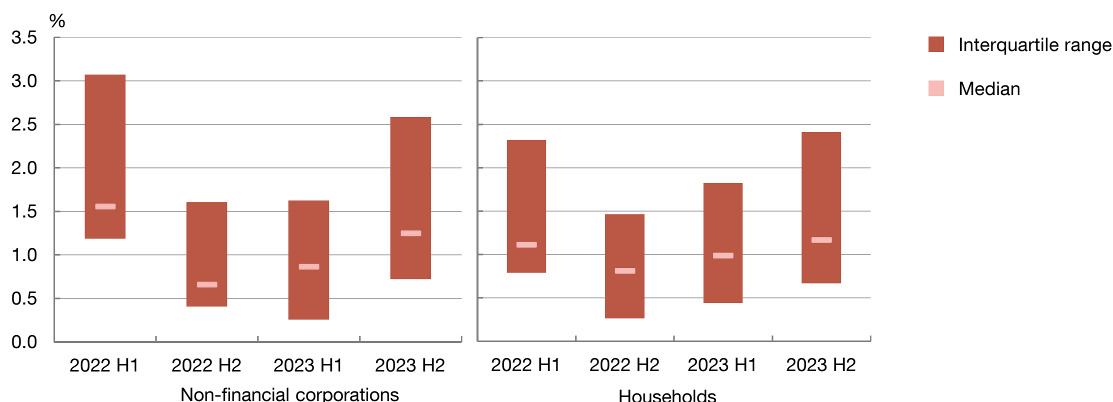
9 The spreads are calculated by reference to the interest rate swap (IRS) benchmark rate according to their maturity.

10 The borrower income used to calculate the LTI and LSTI ratios is proxied using average household income by postcode. As a result, the actual LTI and LSTI ratios may deviate from the estimate, as the borrowers' income may differ from the average values in their geographical area.

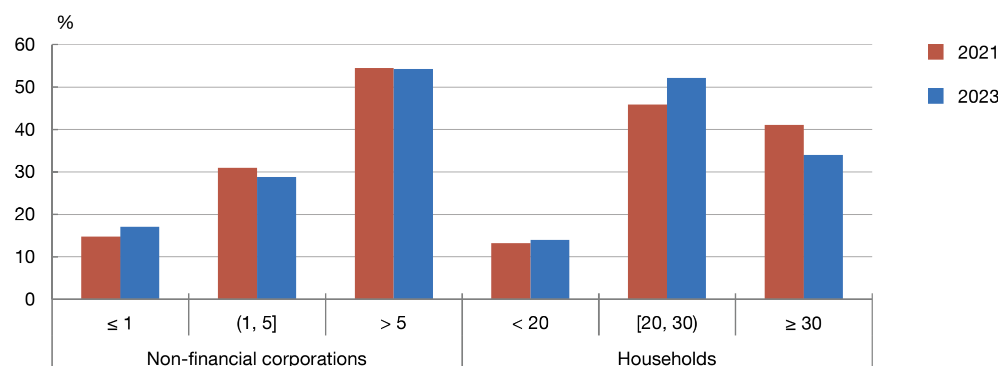
Chart 3.6

Interest rate spreads have widened in lending to non-financial corporations and, more moderately, in mortgages to households, while maturities have shortened slightly

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



3.6.b Percentage of lending, by maturity. Mortgages to households and credit to non-financial corporations (b)



SOURCE: Banco de España.

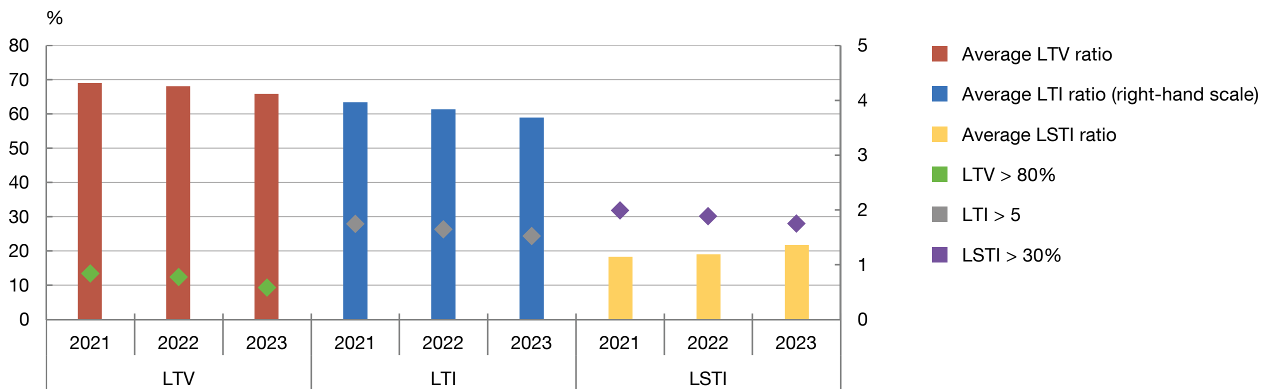
a The chart depicts the interquartile range (difference between the 75th and 25th percentiles) and the median of the average interest rate spread (weighted by the loan amount) applied by deposit institutions over the IRS curve, for new mortgages to households and new lending to non-financial corporations in the corresponding half-year period. 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 non-financial corporations, 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.

b Maturity (measured in years) at origination. New loans are considered in the case of households, while outstanding loans are considered in that of non-financial corporations.

In view of the still high uncertainty in the near term and the subdued situation in Spain's credit cycle, the Banco de España has decided to hold the CCyB rate at 0%. As discussed in the summary, despite receding upside risks to inflation, geopolitical risks remain high. There could also be an abrupt correction in the financial markets, and the risks to economic growth are still tilted to the downside. Maintaining the CCyB rate at 0% reflects this current uncertainty and the absence of signs of new credit imbalances building up in Spain. If disinflation and the

Chart 3.7
The leverage of new mortgage loans continues to decline, although households' average debt burden has increased due to the interest rate hikes

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



SOURCES: Banco de España and Colegio de Registradores.

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 average annual gross household income in the postcode area where the youngest mortgagor resides. The LSTI ratio for each mortgage is estimated as the ratio of the mortgage instalments over the next 12 months to average annual gross household income in the postcode area where the youngest mortgagor resides.
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.

favourable trends in economic activity and bank profitability (both of which proved resilient to the backdrop of elevated geopolitical risks in 2022 and 2023) were to take hold, it could help lessen economic uncertainty over the quarters ahead.

The pace of increases in other European countries' macroprudential buffers has slowed down since the last FSR was published. Latvia has announced that it will activate its CCyB rate at 1%, while Slovenia has announced its intention to raise its CCyB rate from 0.5% to 1%, effective from January 2025.[11] In addition, systemic risk buffers (SyRBs) have been activated in some countries, with the sectoral SyRB being used in many cases to address real estate market vulnerabilities in particular. Specifically, Portugal recently announced the introduction of a sectoral SyRB, applicable to retail exposures to natural persons secured by residential real estate located in the country. Further, Italy has launched a public consultation on a proposal to activate a sectoral SyRB of 1% of domestic credit exposures, to enhance the capacity of its banking sector to absorb systemic shocks while continuing to provide financing to the economy.[12]

11 To offset the increase in capital requirements available for release resulting from the higher CCyB rate, Banka Slovenije has reduced, from 1% to 0.5%, Slovenia's sectoral SyRB for retail exposures secured by residential real estate.
12 Banca d'Italia press release of 8 March 2024.

In December 2023, the Banco de España announced the designation of Banco Santander, S.A. as a global systemically important institution (G-SII) in 2025.[13] The identification of this institution as a G-SII for another year entails the need to maintain a macroprudential capital buffer of 1% of CET1.[14] Under current regulations, the effective capital buffer rate applicable to Banco Santander, S.A. in 2025 as a systemically important institution will be the higher of: (i) the aforementioned G-SII buffer rate and (ii) the buffer rate to be set for other systemically important institutions (O-SIIs) by the Banco de España in 2024.

Lastly, the ESRB published its third report[15] **on the macroprudential stance framework.** The macroprudential stance assessment is a conceptual framework for comparing systemic risks with the policy measures taken to address them. To do so, the ESRB follows two complementary approaches, namely:

(i) a growth-at-risk approach, in which a model is used to estimate the impact that macroprudential policy has on forecasts regarding the distribution of future economic growth, both in normal times and in recessions; and

(ii) an indicator approach, in which indicators for risks, resilience and policy (for example, housing prices and bank capitalisation) are compared.

The aim of these assessments is to see whether the financial system is resilient enough, and whether a country's macroprudential policy stance is neutral, loose or tight relative to the risks it aims to address.

3.2 Regulatory and supervisory developments relevant to financial stability

3.2.1 Structural challenges: climate change and crypto-assets

The EBA has recommended targeted enhancements to the Pillar 1 framework to capture environmental and social risks. In its October report,[16] the EBA assesses how the current prudential framework captures these risks and proposes a series of enhancements aimed at supporting the transition towards a more sustainable economy, while ensuring that the banking sector remains resilient.

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13 See the press release of 14 December 2023 "The Banco de España designates a Global Systemically Important Institution and sets its macroprudential capital buffer rate for 2025".

14 This Banco de España measure is a macroprudential action envisaged in the prevailing EU and Spanish legislation, formalising the prior designation of this bank as a global systemically important bank (G-SIB) by the Financial Stability Board (FSB). "2023 List of Global Systemically Important Banks (G-SIBs)", FSB press release, 27 November 2023.

15 ESRB press release, *"ESRB improves its macroprudential stance framework",* of 15 January 2024.

16 EBA press release, *"The EBA recommends enhancements to the Pillar 1 framework to capture environmental and social risks",* of 12 October 2023.

The EBA has put forward recommendations for short-term actions to be taken over the next three years as part of the implementation of the latest revisions to the Capital Requirements Regulation and Capital Requirements Directive (CRR3/CRD6). Specifically, the EBA proposes to:

(a) include environmental risks as part of stress testing programmes;

(b) encourage the inclusion of environmental and social factors as part of external credit assessments by credit rating agencies, and as part of due diligence requirements and the valuation of immovable property collateral;

(c) require institutions to identify whether environmental and social factors constitute triggers of operational risk losses; and

(d) progressively develop environment-related concentration risk metrics as part of supervisory reporting.

In the report the EBA also proposes possible medium to long-term enhancements, which will take into consideration the developments agreed to at the international level:

(i) the possible use of environmental risk-related scenario analysis to enhance the forward-looking elements of the prudential framework;

(ii) the role of transition plans in future enhancements to the Pillar 1 framework;

(iii) the revision of the internal ratings-based (IRB) supervisory formula and the corresponding standardised approach (SA) for credit risk to better reflect environmental risk elements; and

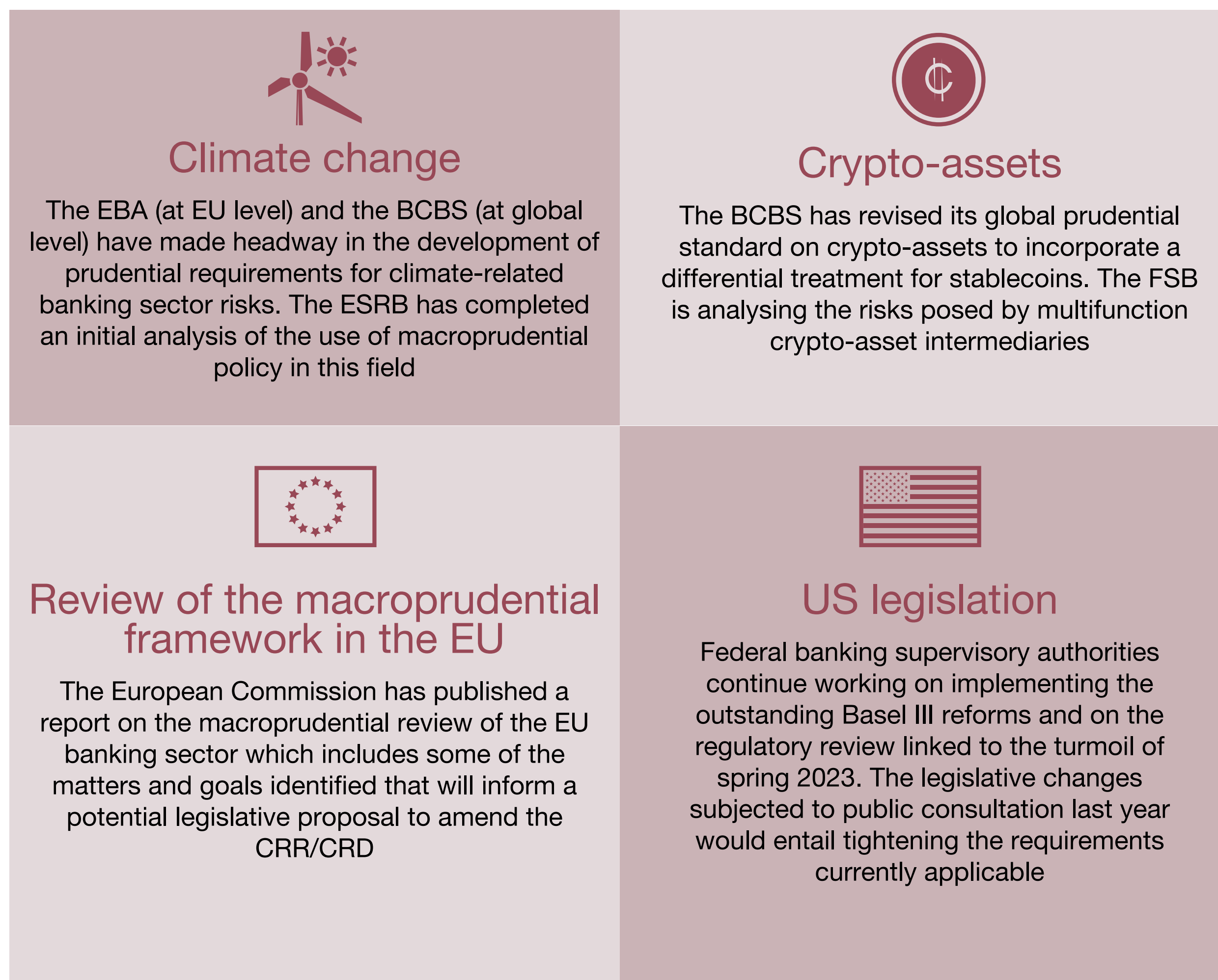
(iv) the introduction of environment-related concentration risk metrics under the Pillar 1 framework.

The European Central Bank (ECB) and the ESRB published a joint report[17] **on the impact of climate change on the EU financial system.** The two authorities highlighted that banks were significantly exposed to high-emitting firms and households, with future climate risks underpriced and underinsured. Against this background, the report: (i) gathers evidence on the most important financial stability indicators (including projected extreme weather events, such as floods, fires and droughts); (ii) acknowledges the macroprudential impact of climate risk and proposes a macroprudential strategy for addressing it that complements other microprudential efforts; and (iii) extends the scope from climate-related risks to broader nature-related risks.[18]

17 ECB press release, *"Banks and insurance have key role to play in reducing climate-related financial stability risks, joint ECB/ESRB report finds",* of 18 December 2023.

18 As defined in the report, "nature" refers to biodiversity as well as climate.

Figure 3.1
Regulatory developments relevant to financial stability



The joint ECB/ESRB report identifies a set of macroprudential tools that could be used to address climate-related risks, and the need to analyse their costs and benefits. Specifically, it points to tools that already exist in EU banking regulations – such as the SyRB – or in most EU Member States' national financial legislation, e.g. borrower-based measures.

The EBA also published the final templates[19] that will be used to collect climate-related data from EU banks. The data collected will be used for the scenario analysis that the EBA – in coordination with the other European supervisory authorities, the ECB and the ESRB – must conduct as part of the European Commission's Fit-for-55 package.[20] The aim of this initiative is to assess the financial system's ability to support the transition to a low-carbon economy.

19 EBA press release, *"The EBA publishes final templates to collect climate-related data from EU banks"*, of 17 November 2023.
20 "Fit for 55" refers to the target of reducing net greenhouse gas emissions by at least 55% by 2030, compared to 1990 levels.

The new data will notably be used to assess concentration risk of large climate exposures and to capture amplification mechanisms and second-round effects should climate-related risks materialise.

At international level, the Basel Committee on Banking Supervision (BCBS) issued a public consultation on a proposal to incorporate climate-related financial risks into the Pillar 3 disclosure framework. This consultation[21] forms part of the BCBS' holistic approach (prudential regulation and supervision) to address climate-related financial risks to the global banking system.[22] The BCBS recognises that the accuracy, consistency and quality of climate-related data are still evolving, but expects that the new Pillar 3 requirements will accelerate the availability of such information and facilitate forward-looking risk assessments in this field.

The BCBS has also analysed the use of climate scenarios by banks and supervisors. This topic was addressed at a BCBS meeting held in Madrid[23] on 28-29 February 2024, along with other matters, including: (i) the risks to, and vulnerabilities of, the banking system; (ii) the revisions to the Basel Core Principles; (iii) the technical adjustments to the assessment framework for G-SIBs;[24] and (iv) the implementation status of Basel III reforms.

The FSB published a report on the risks of multifunction crypto-asset intermediaries (MCIs). The FSB report[25] analyses, in particular, the financial stability implications of MCIs, which are firms that combine a broad range of crypto-asset services, products and functions typically centred around the operation of a trading platform. The identified vulnerabilities of MCIs are similar to those of traditional finance, but may be amplified by, among other factors, a lack of effective controls, unsuitable governance and risk management frameworks and conflicts of interest. Looking ahead, the FSB highlights the need to enhance cross-border cooperation between authorities and to address information gaps.

In parallel, the BCBS launched a public consultation[26] on changes in the prudential standards on the treatment of crypto-assets. In December 2022 the BCBS published its first standard on the treatment of banks' exposures to crypto-assets and how they fit into the Basel III framework. Due to the rapid pace of market developments, and taking into consideration the reviews performed by the BCBS in 2023, it proposes to discriminate between

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21 BCBS press release, *"Basel Committee consults on a disclosure framework for climate-related financial risk",* of 29 November 2023.

22 In 2021 the BCBS published two analytical reports: *Climate-related risk drivers and their transmission channels* and *Climate-related financial risks – measurement methodologies.*

23 BCBS press release, *"Basel Committee agrees to revisions to Basel Core Principles, consults on addressing window-dressing in the G-SIB framework and reaffirms expectation about Basel III implementation",* of 29 February 2024.

24 To prevent window-dressing in the data provided by banks, the BCBS has proposed collecting certain information needed to calculate systemic importance indicators more frequently. BCBS press release, *"Basel Committee consults on measures to address window-dressing in the G-SIB framework",* of 7 March 2024.

25 FSB report, *The Financial Stability Implications of Multifunction Crypto-asset Intermediaries,* of 28 November 2023.

26 BCBS press release, *"Basel Committee consults on targeted adjustments to tighten its standard on banks' exposures to cryptoassets",* of 14 December 2023.

different types of stablecoins.[27] Specifically, those stablecoins that meet a set of conditions on the composition of reserve assets (credit quality, maturity and liquidity) will be subject to the requirements of the existing general capital framework, rather than those of the more conservative specific prudential treatment applicable to other types of crypto-assets.

3.2.2 Other prudential regulatory changes and developments

The European Commission has published a forward-looking report[28] **on the macroprudential review of the banking sector.** The report, which satisfies the requirement for a five-yearly review under the CRR, includes some of the matters and goals identified that will inform the reviews leading to legislative proposals to amend the CRR/CRD. Specifically, the European Commission highlights the goals of:

(i) enhancing macroprudential capital buffer usability and releasability;

(ii) promoting more consistency in the use of certain requirements (in particular the O-SII buffer and the SyRB);

(iii) assessing options to simplify the current framework and enable it to address new types of systemic risks; and

(iv) making headway in developing a macroprudential toolkit for the non-bank financial sector, for which a public consultation will be conducted at the end of 2024.

The BCBS has continued to work on revising its standard on interest rate risk in the banking book (IRRBB). In a recent public consultation,[29] the BCBS proposes targeted adjustments to update the calibration of the interest rate shock parameters used in the IRRBB standard. The BCBS also proposes targeted adjustments to the methodology when interest rates are close to zero. This consultation is unrelated to any further changes the BCBS could pursue on the basis of the conclusions of its ongoing analytical work[30] on interest rate risk following the March 2023 banking turmoil in the United States and Switzerland.

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27 Stablecoins are a type of cryptocurrency designed to minimise fluctuations in their value by linking it to one or several assets with a stable value or to a currency, such as the dollar or the euro.

28 Report from the Commission to the European Parliament and the Council on the macroprudential review for credit institutions, the systemic risks relating to Non-Bank Financial Intermediaries (NBFIs) and their interconnectedness with credit institutions, under Article 513 of 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, of 24 January 2024.

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

30 BCBS report, *Report on the 2023 banking turmoil,* of 5 October 2023.

The FSB will continue to work to further increase the resolvability of banks, central counterparties and insurers. In its 2023 Resolution Report,[31] the FSB took stock of the resolution-related work of the past year as well as of the progress made in implementing resolution reforms and enhancing resolvability across the banking, financial market infrastructure and insurance sectors. The FSB considers that the lessons from the 2023 bank failures in the United States and Switzerland reinforce the need to maintain momentum and advance the work on bank resolvability. Specifically, the FSB will focus its efforts on enhancing implementation of the bail-in resolution tool[32] at a global level and on continuing to address operational challenges. The FSB also plans to review whether existing public sector backstop funding mechanisms are adequate for the range of potential failure scenarios.

The Federal Reserve System and other US supervisory authorities have continued working on finalising several regulatory proposals on bank capital requirements. After extending the comment period to January 2024,[33] federal bank regulatory agencies are analysing possible amendments to the draft standards that would implement:

(i) the final elements of the Basel III Capital Accord;

(ii) various technical amendments to the Federal Reserve's methodology for assessing and determining G-SIB capital buffers; and

(iii) a long-term debt requirement for non-G-SIBs with assets of more than $100 billion.

These measures aim to strengthen the solvency and resilience of the US banking sector and demonstrate the United States' commitment to internationally agreed banking standards.

Under the Spanish presidency of the Council of the European Union, in November the Council adopted[34] a regulation on central securities depositories (CSDs) that will improve the efficiency of securities settlement in the EU. The new regulation, which will become effective in 2024, will reduce compliance costs and regulatory burdens for CSDs, improve cooperation between supervisors and, after simplifying the existing passporting[35] regime, also make it easier for CSDs to offer services across borders.

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31 FSB press release, *"FSB outlines work to further increase the resolvability of banks, central counterparties and insurers"*, of 15 December 2023.

32 This tool enables the resolution authority to write down capital and, where appropriate, certain debt instruments to absorb any losses the institution may have incurred. Subsequently, other debt instruments are converted into capital in order to recapitalise the institution.

33 Joint press release of the Federal Reserve Board, Federal Deposit Insurance Corporation and Office of the Comptroller of the Currency, *"Agencies extend comment period on proposed rules to strengthen large bank capital requirements"*, of 20 October 2023.

34 Council of the European Union press release, *"Council adopts regulation on Central Securities Depositories"*, of 27 November 2023.

35 'Passporting' refers to the procedure whereby credit and other financial institutions based in one EU Member State can provide services in another Member State.

Lastly, in March the ECB issued a statement[36] **on advancing the capital markets union (CMU).** The ECB Governing Council believes there are strong reasons for supporting and enhancing this initiative, which was launched by the European Commission in 2015 to diversify the EU financial system and mitigate its fragmentation. Specifically, an effective CMU would contribute positively to the goal of a more integrated European banking sector as it would benefit from more cross-border financial services activities and a wider investor base. As a result, the CMU would make European banks more resilient and help lower the remaining barriers within the banking union.

36 "*Statement by the ECB Governing Council on advancing the Capital Markets Union*", of 7 March 2024.