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SPAIN

FINANCIAL SYSTEM STABILITY ASSESSMENT

June 2024

This paper on Spain was prepared by a staff team of the International Monetary Fund. It is based on the information available at the time it was completed on May 14, 2024.

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KEY ISSUES

Context: The Financial Sector Assessment Program (FSAP) took place in an uncertain economic environment with tight monetary and financial conditions and elevated downside risks. The bank-dominated Spanish financial system has shown resilience against shocks and household and nonfinancial corporate sectors have continued to de-lever their balance-sheets. Nonbank financial intermediation comprises a smaller share of the financial system.

Findings: Systemic risk analyses covers the banking, household, nonfinancial corporate, and real estate sectors. The main risks to financial stability are of 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. Significant Spanish banks display resilience in the aggregate under the FSAP's adverse scenario amid significant credit deleveraging and evidence of a weak tail of banks. Banks' ability to cope with asset quality pressures without resorting to deleveraging is inhibited by incumbent solvency buffers that are lower than European peers on a risk-weighted basis.

Policy advice: In the near-term, deploying policies that ensure that significant banks retain a greater share of profits to further raise capital buffers and be better positioned against downside risks is desirable. Macroprudential and supervisory authorities need to be well resourced to address emerging risks and challenges and close previously identified gaps in the policy framework. Key specific priorities include: further strengthening of the operational independence of two key domestic supervisory authorities, including alignment of resources to current and expected workloads; enhancing the transparency, impact, and accountability of the macroprudential authority; increasing further the effectiveness of the risk-based supervisory approach for less significant banks; further enhancing the supervision of margin practices of the Spanish central counterparty and improving elements of the recovery plans of financial market infrastructures; strengthening the institutional and legal frameworks for bank recovery and resolution; and clarifying arrangements for funding in resolution.

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This report is based on the assessment work under the Financial Sector Assessment Program (FSAP) conducted during October 2023 and January-February 2024. The findings were discussed with the authorities in February 2024 (the close of the FSAP) and in April 2024 (the Article IV Consultation).

- The FSAP team was led by Jay Surti (Mission Chief) and Luc Riedweg (Deputy Mission Chief) and included: Sneha Agrawal, Rachid Awad, Yaiza Cabedo, Tamas Gaidosch, Elisa Letizia, Yu Shi, Puja Singh, Hamid Reza Tabarraei, and Adrian Wardzynski (all IMF); Nigel Jenkinson and Eamonn White (IMF external experts). Zoltan Jakab contributed to the modeling of the adverse scenario; Shanyuan Zheng provided research support; and Carol Franco and Marie-Bernadette Amand de Mendieta (all IMF) administrative support. The FSAP team also collaborated closely with the Spain Article IV team.
- The team met with the Minister of Economy, Trade and Enterprise (MINECO) Carlos Cuerpo; Banco de España (BdE) Governor Pablo Hernández de Cos; Comisión Nacional del Mercado de Valores (CNMV) Chair Rodrigo Buenaventura; and other senior officials of the BdE, the CNMV, the Deposit Guarantee Fund, the Directorate General of Insurance and Pension Funds (DGSFP), Spain's Executive Resolution Authority (FROB), MINECO, the European Central Bank (ECB), and other senior representatives of the public sector, banks, asset managers, auditors and other private sector stakeholders.
- FSAPs assess the stability of the financial system as a whole and not that of individual institutions.
 They are intended to help countries identify key sources of systemic risk in the financial sector and
 implement policies to enhance its resilience to shocks and contagion. Certain categories of risk
 affecting financial institutions, such as operational or legal risk, or risk related to fraud, are not
 covered in FSAPs.
- Spain is deemed by the Fund to have a systemically important financial sector according to SM/10/235 (9/16/2010), and the stability assessment under this FSAP is part of bilateral surveillance under Article IV of the Fund's Articles of Agreement.

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Glossary

AMCESFI Autoridad Macroprudencial Consejo de Estabilidad Financiera (Spain's

Macroprudential Authority Financial Stability Council)

AML/CFT Anti-Money Laundering/Combating the Financing of Terrorism

AT1 Additional Tier 1
BDE Banco de España

BRRD Bank Recovery and Resolution Directive
BMEC Bolsas y Mercados Españoles Clearing

CBC Counterbalancing capacity
CCB Capital Conservation Buffer

CCP Central Counterparty

CCyB Countercyclical Capital Buffer

CET1 Common Equity Tier 1

CF Cash Flow

CNMV Comisión Nacional del Mercado de Valores - National Securities Markets

Commission

CRD Capital Requirements Directive

CPI Consumer Price Index
CRE Commercial Real Estate
CSD Central Securities Depository

CDR Central Securities Depository Regulation

CSP Critical Service Provider

DGSFP Dirección General de Seguros y Fondos de Pensiones (Spain's General Directorate

of Insurance and Pension Funds)

DORA Digital Operational Resilience Act

DSTI Debt Service to Income

EA Euro Area

ECB European Central Bank

ELA Emergency Liquidity Assistance

EMIR European Market Infrastructure Regulation
ESMA European Securities and Markets Authority

ESRB European Systemic Risk Board

EU European Union

FATF Financial Action Task Force

FGD Fondo de Garantía de Depósitos (Spain's Deposit Guarantee Scheme)

FMIs Financial Market Infrastructures

FROB Spain's Executive Resolution Authority
FSSA Financial Sector Stability Assessment
FSAP Financial Sector Assessment Program

FSB Financial Stability Board FSR Financial Stability Report

FX Foreign Exchange

GDP Gross Domestic Product
GFC Global Financial Crisis

GMM Global Macrofinancial Model

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GRAM Global Risk Assessment Matrix
GSIB Global Systemically Important Bank

HQLA High-quality liquid assets

HTM Held-to-Maturity

IAIS International Association of Insurance Supervisors

IC Iberclear

ICO Instituto de Crédito Oficial ICR Interest Coverage Ratio

IF Investment Fund

IFRS International Financial Reporting Standard

IMF International Monetary Fund

IRRBB Interest Rate Risk in the Banking Book

IT Information Technology LGD Loss Given Default

LCR Liquidity Coverage Ratio
LSI Less Significant Institution

LTV Loan to Value

MMF Money Market Fund

MICA Markets in Crypto-Assets Regulation

MINECO Ministry of Economy, Commerce and Business Economy, Trade and Enterprise

NBFI NonBank Financial Intermediation

NFC Nonfinancial Corporate

NII Net Interest Income

Non-II Non-Interest Income

NPL Nonperforming Loan

NSFR Net Stable Funding Ratio

OSII Other Systemically Important Buffer

PFMI Principles for Financial Market Infrastructures

PD Probability of Default
RAM Risk Assessment Matrix
RRE Residential Real Estate
SI Significant Institution

SME Small and Medium Enterprises

SPE Special Purpose Entity
SRA Systemic Risk Assessment
SRB Single Resolution Board

SSM Single Supervisory Mechanism SSS Securities Settlement System

STeM Stress Test Matrix

TLTRO Targeted longer-term refinancing operations
TIBER Threat Intelligence-based Ethical Red Teaming

VASPs Virtual Assets Service Providers

UCITS Undertakings for collective investment in transferable securities

WEO World Economic Outlook

EXECUTIVE SUMMARY

Spain's economy and its well-developed, bank dominated financial system have shown resilience through the pandemic, rising global geo-political tensions and tighter financial conditions. The economy remains near potential and growth is projected to continue its robust performance in the coming quarters. The long running trend of deleveraging by households and nonfinancial corporates continues, mitigating the impact of rising borrowing costs on private consumption and on debt servicing capacity. Activity is cooling and overvaluation receding in the housing market, and commercial real estate valuations remain contained. Nonbank financial intermediation (NBFI) comprises a smaller share of the financial system. Public debt remains elevated despite a reduction since end-2020 and the financial sector's sovereign exposures are significant.

The banking sector has a global footprint, operates a traditional business model, is profitable, and has demonstrated agility in adapting to an evolving business environment. Banks are deposit-funded credit intermediaries with low intra-financial system, and limited intra-group, exposures. A significant share of business and earnings of the largest banks emanates from foreign subsidiaries. Profitability, already healthy, has grown significantly as lending margins rose in-step with rising interest rates and asset quality has remained stable, allowing banks to increase dividend payouts and accelerate share buybacks while holding solvency buffers steady. Liquidity buffers are ample. Banks play a dominant role in the domestic fintech landscape, seizing opportunities provided by shifting payments preferences of consumers. Spanish banks are among the most exposed to sovereign risk in Europe.

Downside risks are prominent and existing vulnerabilities could amplify the impact of exogenous shocks on financial stability. Further escalation of global, geopolitical tensions and renewed volatility in commodity markets, especially energy markets could create critical supply chain bottlenecks, further raise inflation, increase the likelihood of recession, and result in tighter domestic monetary and financial conditions, which could challenge debt servicing of households and firms. Banks' ability to cope with consequent pressures on asset quality without resorting to deleveraging will depend crucially on incumbent solvency buffers which do not compare favorably to European peers on a risk-weighted basis due, in part, to lower voluntary buffers.

Significant banking institutions (SIs) display resilience in the aggregate under the adverse stress test scenario, albeit with significant credit deleveraging and evidence of a weak tail of SIs. In the aggregate, SIs maintain adherence to overall capital requirements through the adverse scenario horizon, with two of the ten breaching them after two years. SIs' aggregate solvency resilience is, in important part, built on the back of substantial credit deleveraging. An increase in profit retention by banks in the immediate term, when profitability is high and is projected to remain robust under the baseline, would have material economic payoff should downside tail risks materialize since their larger capital buffers would permit them to better satisfy credit demand and mitigate macroeconomic costs. The authorities should, therefore, deploy policies, including but not necessarily limited to, the introduction of a positive neutral countercyclical buffer (CCyB) rate to ensure that banks raise capital buffers to be better positioned against downside tail risks. Banks'

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robust liquidity performance reflects the high share in funding of retail deposits and large reserves of high-quality liquid assets. Stress tests show that SIs use up significant liquidity buffers only in the face of unusually large withdrawals of retail deposits.

Targeted further enhancement of the already strong financial system oversight and policy framework will serve to preserve and promote financial stability.

- Ensuring that supervisory authorities are well resourced is paramount. The FSAP
 recommends granting full autonomy to the CNMV, which it currently lacks, over its recruitment
 process and ensuring alignment of resources at the BdE and CNMV to current and expected
 workloads.
- Further enhancements to the framework and toolkit for macroprudential policy on top of significant recent progress are necessary to increase the transparency, impact, and accountability of Spain's macroprudential authority (AMCESFI) while preserving the operational independence of the sectoral regulators. The FSAP also recommends that a decision to introduce a positive neutral CCyB on top of existing buffers be taken as soon as feasible.
- Further key steps to strengthen the regulation and supervision of less significant banking institutions (LSIs) would consolidate gains from recent progress, including strengthening BdE operational independence, increasing onsite activities of LSIs' risk management, streamlining offsite monitoring, ensuring that LSIs adequately manage concentration risk, including sovereign risk, and embedding climate-related financial risks into supervisory activities.
- A few enhancements, notably to recovery planning, would serve to make Spain's sound framework for the supervision of its central counterparty (CCP) and central securities depository (CSD) even more robust.
- The *regulatory and supervisory framework for cyber risk* is comprehensive, and there are benefits from conducting onsite examinations as part of FMI supervision and more thematic reviews of LSIs. The BdE and CNMV should be involved in critical infrastructure related matters, such as designation and compliance assessments.
- While the inter-agency sandbox to supervise and monitor fintech developments is an
 important tool, administrative procedures could be streamlined and greater flexibility should be
 extended to authorities to rely on their wider range of tools to monitor market developments,
 convey supervisory expectations, and assess the adequacy of the regulatory perimeter.
- The Spanish financial safety net and crisis management arrangements rest on sound statutory foundations, but further work is required to enhance the operational capacity of the resolution regime. Preventative and executive resolution authority functions should be vested in a single agency. The authorities should expand the set of resolution options and establish an approach to addressing liquidity needs in resolution.

	Table 1. Spain: FSAP Key Recommendations		SPAIN
	Recommendation	Addressee	Timing ¹
	SYSTEMIC RISK ANALYSIS AND MONITORING	Addressee	riiiiig
1.	Enhance data collection and monitoring of foreign investments in the real estate market.	BdE, CNMV, DGSFP	NT
2.	Create the infrastructure for a more granular cash-flow analysis (as designed by the FSAP) and report regular stress testing results.	BdE	NT
	FINANCIAL SECTOR OVERSIGHT		
3.	Ensure alignment of resources of supervisory authorities to current and expected future workload	Government, BdE, CNMV, DGSFP	I
4.	Grant full autonomy to CNMV over its recruitment and retention processes and streamline related procedures.	Government, CNMV	I
Macr	oprudential Policy		
5.	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.	BdE, AMCESFI	I
6.	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.	AMCESFI	I
7.	Review the case for appointing two or three external members to AMCESFI to strengthen the diversity of perspectives and expertise.	MINECO. AMCESFI	I
8.	Further develop and deepen the macroprudential framework by addressing remaining data and information gaps, as well as by strengthening reporting requirements.	BdE, CNMV, DGSFP, AMCESFI	NT
Supe	rvision and Regulation of Banking LSIs		
9.	Enhance BdE's independence by removing MINECO appeal powers against BDE supervisory decisions and sanctions and limiting the role of government's representatives in the BdE Governing Council.	MINECO	NT
10.	Streamline the offsite monitoring system and apply proportionality in conducting SREPs while performing more frequent and targeted onsite inspections and thematic activities.	BdE	I
11.	Strengthen BdE onsite inspection activities on LSIs' governance and risk management, particularly management of liquidity risk and interest rate risk in the banking book.	BdE	I
Regu	lation, Supervision and Oversight of FMIs		
12.	Ensure that international supervisory coordination arrangements with other supervisors reflect scope and degree of interconnectedness of BME Clearing, Iberclear and their foreign parent company.	CNMV	MT
13.	Ensure timely implementation of CNMV's recommendations	CNMV	NT
Cybe	r Security Risk Supervision and Oversight		
14.	Conduct onsite examinations as part of FMI supervision; Conduct more thematic reviews while maintaining short onsite visits to a sample of LSIs; Develop a lighter threat intelligence based red-teaming framework based on TIBER-ES principles.	CNMV, BdE, MINECO	NT

	Table 1. Spain: FSAP Key Recommendations (concluded)	
	Recommendation	Addressee	Timing
15.	Involve the BdE and CNMV in critical infrastructure related matters, such as designation and compliance assessments.	Government	NT
Finte	ch		
16.	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.	Government, BdE, CNMV, DGSFP	NT
Finan	cial Integrity		
17.	Complement the National Risk Assessment, ensure accuracy of data stored in centralized beneficial ownership register, and extend AML-CFT risk-based supervisory activities to professional enablers and virtual asset providers.	SEPBLAC, Treasury, BdE, The Registrars' AML Centre, Ministry of Justice	NT
CRISI	S MANAGEMENT AND FINANCIAL SAFETY NETS		
18.	Integrate preventative resolution authority functions (i.e., BdE resolution planning department) and FROB's executive resolution functions for banks	MINECO	I
19.	Improve the statutory resolution regime so FROB has resolution power to override shareholders rights, update the statutory insolvency creditor hierarchy, and enable liquidators to transfer deposit accounts.	MINECO	NT
20.	Establish and operationalize an approach to address liquidity needs in resolution.	BdE	I

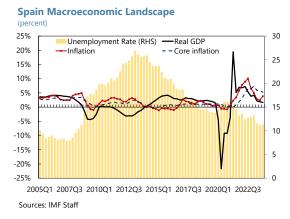
BACKGROUND

A. Context and Macro-Financial Developments

1. The Spanish economy remains near potential with growth outperforming Euro Area (EA) peers (Figures 1 and 2; Table 2). Strong services export performance and public consumption have been key drivers of the economic recovery since the pandemic. Growth is projected to continue its robust performance in the coming quarters, reaching an average of 2.4 percent in 2024, reflecting stronger domestic demand, expected rebound of trading partners, and continued

normalization of global energy prices.

Disbursements of Next Generation EU (NGEU)
grants, followed by NGEU loans, will continue to
support investment. Headline inflation rebounded
to above 3 percent after falling below target levels
in the summer, as the base effects from high energy
prices in 2022 dissipated, while core inflation has
continued to fall gradually. Headline and core
inflation are expected to return close to the ECB's
target before mid-2025. Inflation and a tight labor
market—the unemployment rate reached a post-



GFC low at below 12 percent—have led to a gradual build-up of wage pressures, although the national wage agreement should help contain the growth of collectively bargained wages.

2. Deleveraging in key sectors over the last decade has contributed to a sustained downward trend in the credit-to-GDP gap which remains in negative territory (Figure 2).

- The household sector has weathered the recent surges in interest rates well, reflected in the stable performance of household loans amidst the repricing of variable rate mortgages in 2023 due to continued deleveraging and strong performance of income and employment (Figures 3). Total outstanding household debt declined by 2.4 percent y-o-y as of November 2023 to 47 percent of GDP, reflecting prepayment of mortgages and tighter lending standards (Figure 3c). The resilience of household balance-sheets is also confirmed by the limited take-up thus far of the end-2022 package of measures adopted by the government to support low- and middle-income households most affected by the increase in borrowing costs.
- The Nonfinancial Corporate sector (NFC) has also reduced its debt burden and improved its debt repayment capacity (Figures 3 and 5). After declining continuously since the euro crisis, the debt-to-GDP ratio of the NFC sector fell to 82 percent in 2023Q3 positioning Spain as one of the least indebted corporate sectors among its European peers (Figure 3c). Firms' liquidity indicators have also improved since the GFC and profitability has experienced an upward trend over the past decade barring the pandemic (Figure 5 b,c,h,i). More recently, tightening lending standards and higher interest rates contributed to a reduction in new credit to NFCs in 2022 resulting in a rebound in debt repayment capacity of all firms (Figure 3e).

- 3. Prices have increased moderately in the residential real estate (RRE) market even as activity is cooling down (Figures 6). Housing transaction volumes fell by 13.4 percent on average during the first three quarters of 2023 (Figure 6b). While nominal house prices have started to decrease elsewhere in the EA, they have continued to register small increases in Spain in recent quarters due to large immigration flows and supply shortages (Figure 6 a,c). The cumulative increase of RRE prices in Spain since 2019Q3 is in line with the EA average, and real RRE prices remain significantly below pre-GFC levels. Lending standards are prudent, with low average loan-to-value (LTV) ratios and a declining share of loans with LTV ratios higher than 80 percent (Figure 6d). Nonetheless, close monitoring is warranted in the new dwellings segment where price appreciation exceeded 10 percent y-o-y as of 2023Q3 and there is an increasing share of housing transactions completed by non-mortgage buyers, including foreign ones.
- 4. Housing valuations show no significant signs of overvaluation (Figure 6 e,f). Spain's ratio of house prices to income, stable since end-2019, declined moderately recently following robust growth of household incomes. The price-to-rent ratio has been continuously increasing, reflecting both, limits on rent increases at contract renewals arising from the authorities' antiinflation measures and the fact that the rent index does not fully capture new rental contracts. Both ratios remain significantly lower compared to pre-GFC levels. The FSAP's analysis suggests that house price overvaluation relative to fundamentals dropped from around 6 percent in 2022Q1 to 2.1 percent by 2023Q3 based purely on demand-side factors such as income, population growth, and interest rates,. Adding the impact of the credit cycle and of supply-side constraints results in a further reduction in the estimated price misalignment to around 0.9 percent in the last two quarters.
- Spanish commercial real estate (CRE) prices have stayed below pre-pandemic levels and bank exposures to the CRE market are contained (Figure 7). Recovery from the marked slowdown in this market during the pandemic has been slow, with prices in all segments remaining below pre-pandemic levels as of 2023Q3 (Figure 7a), and transaction volumes and new mortgage credit growth slower than in 2021-22 (Figure 7b). Tighter lending standards could continue to weigh on CRE prices and the accelerated trend of digitalization could impose further downward pressures. Downside risks are expected to have a limited impact on banks, however, given the small size of the Spanish CRE market compared to European peers (Figure 7 c,d). The increasing reliance on foreign funding by this sector points to the importance of enhancing data collection on foreign investments in the CRE market, potentially in collaboration with European institutions and foreign jurisdictions.
- 6. Public debt remains elevated despite a reduction since end-2020 and the financial sector's sovereign exposures are significant (Figures 8 and 9). Fiscal resources deployed to mitigate the pandemic impact took a toll on Spanish public finances. After a sharp increase of around 25 percentage points in 2020, the debt to-GDP-ratio decreased over the next two years, reaching 107 percent in December 2023. 26 percent of Spanish sovereign debt securities is held by Spanish banks and the domestic NBFI sector. Sovereign debt (including EA securities) accounts for a significant proportion of assets held by banks (11 percent), insurance firms (44 percent), pension funds (30 percent) and open-ended investment funds (OEF, 30 percent), with Spanish banks remaining among the most exposed to sovereign risk across European peers.

B. Financial Sector Structure and Vulnerabilities

- 7. The bank-dominated Spanish financial system is large and well-developed (Text **Table).** Aggregate assets of credit institutions amounted to 285 percent of GDP in 2023. The financial system also includes insurance firms, pension funds, open-ended mutual funds, securitization vehicles, and Financial Market Infrastructures (FMIs). The NBFI sector accounts for 25 percent of domestic financial sector assets. Individual segments of this sector constitute small shares of GDP and are not interconnected to a significant degree (Figure 26e). Spain hosts two FMIs, Bolsas y Mercados Españoles Clearing (BMEC), a CCP, which is considered systemically important in both Spain and other jurisdictions, and Iberclear (IC), a CSD that is systemic from a domestic perspective.
- 8. Spanish banks operate a universal model with a strong retail orientation (Figure 10). Bank funding is dominated by retail-sight deposits, and nearly 90 percent of bank lending is channeled towards lending to mortgages and NFCs (Figure 10 c-f). As at Sept-2023, the share of floating rate loans to households and NFCs stood at 63 percent and 57 percent respectively. Spanish SIs represent almost 95 percent of banking sector assets (Figure 10a).

Total Assets (in billions of euros)					
	In billion euros	In percent of total assets	In percent of GDP		
Credit institutions	4147.9	74.8	285.3		
Specialised lending institutions (CFI)	53.2	1.0	3.7		
Money Market Funds	7.1	0.1	0.5		
Investment Funds	374.6	6.8	25.8		
Other financial intermediaries	205.5	3.7	14.1		
Financial auxiliaries, Captive financial institutions and money lenders	310.2	5.6	21.3		
Insurance corporations	293.6	5.3	20.2		
Pension funds	152.5	2.7	10.5		

- 9. The largest banks—one of which is globally systemically important (GSIB)—have significant presence in foreign jurisdictions structured in the form of subsidiaries (Figures 11 and 12). These span Brazil, Mexico, Türkiye, the United Kingdom, and the United States, and contribute significantly to their total assets and profits. Exposures to counterparties located in these jurisdictions accounted for 66 percent of the consolidated foreign claims of Spanish banks (EUR 1.8 trillion in total) (Figure 12a). Exposures to NFCs (58 percent) and sovereigns (25 percent) represent the lion's share of total foreign claims, while the exposure to banks in other countries is limited (10 percent). Spanish SIs' international businesses are organized into legal subsidiaries funded by local retail deposits and their own issuance programs. As a result, the extent of intragroup claims and liabilities within Spanish banks is significantly lower than in other major banking systems (Figure 12f), but this could change in a crisis during which parent entities and their subsidiaries may have to rely more on each other to manage funding pressures.
- 10. Banking sector profitability has been strong and boosted by a recent increase in net interest income (NII), although deposit migration could reverse this trend in 2024 (Figure 13; Table 4). Spanish banks are well positioned compared to EA peers in terms of earnings and efficiency with profitability having rebounded to pre-pandemic levels (Figure 13 a,e,f). Return on equity stood at 12.1 percent, while return on assets was 0.76 percent in June 2023. In the coming

quarters, SIs' profitability may decline if lending activities continue contracting and funding costs rise, e.g., due to an increase in deposit betas or a switch in depositors' preferred habitat from sight to term deposits and alternative interest yielding investments (Figure 13 c,d) as the transmission of higher monetary policy rates continues (Figure 14).

- Spanish SIs have lower capital buffers than European peers while maintaining ample 11. liquidity buffers (Figure 15; Table 4). Capital ratios have improved moderately for the aggregate of the Spanish SIs with the CET1 ratio at 12.6 percent as of June 2023. Spanish SIs' CET1 ratios remain lower than EA peers owing to higher risk-weight density and lower voluntary buffers, with banks preferring to issue high dividend payouts and buy-back shares over retaining earnings to increase capital levels in recent quarters. On the other hand, Spanish SIs' leverage ratios are comparable to most EA peers, and they faced among the least amounts of capital depletion in the 2023 European Banking Authority (EBA) adverse stress test scenario (Figure 15 c,d). The Liquidity Coverage Ratio (LCR) stood at 182 percent in June 2023, well above the minimum required threshold. Internationally active Spanish SIs tend to have lower LCRs (153 percent in June 2023) in line with their EA peers.
- Nonperforming loan (NPL) ratios have slightly increased in 2023 for households and 12. declined for NFCs (Figure 16; Table 4). This recent increase in household NPLs came after a significant decrease since the end of the GFC. The NPL ratio of the banking sector decreased by three-percentage points in the five years up to June 2023 (Figure 16a). The share of Stage 2 loans a leading indicator of future NPLs—increased moderately over the last year, to an average of 7.6 percent of lending to the private sector in 2023Q3 (Figure 16c). Additionally, loans amounting to euro 67 billion backed by Instituto de Credito Oficial (ICO) and issued at the time of COVID-19 as a support measure are facing a significantly higher proportion of Stage 2 loans and NPLs (20.6 percent and 9.6 percent, respectively). Provisioning coverage of NPLs grew in the twelve months prior to June 2023, reaching 46.5 percent for NFCs and 40.2 percent for households (Figure 16d). Compared to EU averages, provisioning coverage of NPLs was lower for households and higher for NFCs in 2023Q2.
- The small Spanish LSI sector operates a traditional retail banking model (Figure 17). 13. The 67 LSIs are composed of 42 credit cooperatives, 23 banks, and 2 saving banks. LSIs are financed almost completely domestically (92 percent are Spanish counterparties). They have relatively low loan-to-deposit ratios and a high volume of liquid assets, and all of them are eligible for monetary operations with the ECB. Overall, their liquidity position (in terms of LCR and NSFR) is well above the regulatory ratios. Spanish LSIs are well positioned compared to peers both in terms of capitalization (with a CET1 ratio of 21 percent in June 2023), return on equity and operational efficiency, while NPLs remain relatively low in the aggregate but moderately above the LSI SSM average.
- Banks play a dominant role in Spain's fintech landscape wherein activity and 14. investments are concentrated in payments and only fledgling in investments and asset management (Figure 18). Banks and a diverse group of nonbanks are active in the provision and innovation of digital financial services and products. Outside of payments, most fintech activities are not yet material from a financial stability perspective. Spending on digital products, services and communication has increased across the banking sector, albeit sales and transactions growth are

demonstrably proportional to bank size and business scope, reflecting shorter time-to-market and greater analytical capacity of the larger banks. Banks have been agile in seizing the opportunity provided by the significant shift in consumers' payment preferences. Digital banks enjoy a wide client base and monetization and scalability potential but are as yet unable to diversify business lines.

15. Nonbank fintech activity is diverse but facing challenges of scaling up and monetizing innovations like in other jurisdictions. Nonbank digital lending has remained very small with apparently limited ability to scale. The crypto sector is small (rapid growth from a very low base); concentrated (significant share of domestic investors served by two companies); with low penetration limited to small investors, and with speculative investments constituting the largest share of client activity.

SYSTEMIC RISK ASSESSMENT

A. Key Risks to Financial Stability

- 16. Key financial stability risks emanate from elevated global geopolitical tensions that underpin an uncertain economic outlook (Table 3). Further escalation of geo-political tensions, higher-for-longer interest rates, and renewed volatility in commodity markets, especially energy markets could create shortages in critical supply chain components, further raise inflation, increase the likelihood of recession, and result in even tighter domestic financial conditions. Economic actors could become more pessimistic about the macro-financial environment, increasing risk aversion, with negative macro-financial consequences. All of this would, in turn, weigh on households, NFCs, the property market, and ultimately, on banks' asset quality. In such context, domestic policy miscalibration, including uncertainty about medium-term fiscal commitments, or exogenous events, such as cyber threats, could amplify the financial stability impact of shocks. The banking sector is also exposed to the risks associated with climate change, notably physical risks (Figure 19).
- **17**. The FSAP conducted stress tests to assess the resilience of the banking system against macroeconomic and liquidity shocks (Table 5, Figure 20). The baseline scenario underlying the solvency stress tests is aligned with the October 2023 World Economic Outlook projections. The adverse scenario reflects the main risks presented in the risk assessment matrix (Table 3). It spans a three-year horizon (2024-2026), with a significant and persistent recession entailing a cumulative loss of 7 percentage points of real GDP over two years with a gradual recovery in 2026. Under the adverse scenario, a combination of shocks results in a significant global economic downturn, with negative spillover effects across trade and financial channels. Rising geopolitical concerns and related energy price spikes increase inflation, interest rates and term premia, with the associated increase in borrowing costs contributing to lower economic activity.

B. Household and Corporate Vulnerability Analysis

Households

- 18. Under the baseline scenario, deleveraging and robust income growth would continue to support households' financial health, with vulnerability concentrating among low-income households (Figure 4). Simulations using data from the Spanish Survey of Household Finances suggest that overall vulnerability of household finances would continue to decrease from their peak level of 2022 (Figure 4a). The catch-up of wage income to high inflation of 2022, the normalization of energy and food prices, and households' deleveraging have mitigated the impact from rapidly rising interest rates for households. The share of households with debt-service-to-income ratios (DSTI) greater than or equal to 40 percent would drop from 6½ percent in 2022 to 6 percent in 2024. Under an alternative cost-of-living adjusted definition of vulnerability, where a household is defined as economically vulnerable if debt servicing payments plus essential expenses on food, utilities, and rents exceeds 70 percent of household income, the number of vulnerable households is also expected to decrease in 2024. Nonetheless, household vulnerability is still higher compared to European peers in the baseline, and low-income households have fewer financial assets and accumulated savings, which might limit their capacity to cope with rising debt servicing pressures (Figure 4b).
- 19. Under the adverse scenario, the household sector appears to be, on average, resilient from a debt servicing perspective (Figure 4 c,d). Households are expected to further de-lever balance-sheets, and wage income partially catches up with high inflation. Except for the lowest income quintile, whose initial debt-to-income ratio is higher, and income is more sensitive to unemployment shocks, the remaining income quintiles see limited increases in their average DSTI ratios. The share of households at risk, defined as households with a DSTI ratio of over 40 percent, remains stable, except in the lowest income quintile group. Overall, the share of households at risk would not change significantly in the adverse scenario when compared to baseline, since the lowest-quintile income group holds only a small share of total household debt.
- 20. Nonetheless, continued pressures on food and energy prices originating from global commodity price spikes can create additional stress for households in the adverse scenario (Figure 4 e,f). When also considering the cost of living in the adverse scenario, the share of vulnerable households in Spain would increase from the already-higher-than-peers levels of the baseline, i.e., from 26 percent to 34 percent in 2024. The lowest three quintiles are expected to observe significantly higher shares of vulnerable households by 2026, when commodity prices would still be high in the adverse scenario. The share of household debt-at-risk would also increase by 8.4 percentage points, with contributions from all income quintiles.

¹ The methodology follows Valderrama et al. (2023).

Nonfinancial Corporates

21. The analysis suggests a moderate increase in the share of firms that could face debt servicing problems in the adverse scenario (Figure 21). The analysis of the resilience of NFCs is based on measuring the share of firms that could face debt servicing and liquidity problems under the baseline and adverse scenarios.² Liquidity problems are proxied by the firms' cash ratios.³ To assess debt servicing problems, the analysis categorizes firms into different risk levels depending on their interest coverage ratios (ICRs).⁴ The debt-at-risk⁵ is projected to increase by 1.7 percentage points compared to the baseline scenario by 2026, reaching 29.5 percent of the total debt of these firms. The proportion of firms with an ICR of less than one rises by over 6 percentage points in the adverse scenario relative to the baseline by end-2024. Empirical analysis indicates that the primary driver of this increase in debt-at-risk is reduced economic activity in the adverse scenario. Compared to the baseline scenario, the relative severity of cashflow problems in the adverse scenario peaks in 2025, where the share of firms with expenses greater than income is higher by 4 percentage points.

C. Bank Stress Tests

Solvency

- 22. The FSAP solvency stress test is a top-down exercise that covers consolidated global exposures of 10 SIs accounting for almost 95 percent of the banking system's total assets. The exercise is based on the IMF's internally developed solvency stress-testing framework and covers a comprehensive set of risks, including credit, earnings, and market risks (Table 7). The projections of revenues, expenses, and loan losses are based on modelled output of the balance-sheet for each bank over the scenario horizon.
- 23. Banks perform well in the baseline scenario (Figure 22 a,b). The aggregate CET1 capital ratio exhibits an upward trajectory, reaching 15.4 percent at the end of 2026, from a starting point of 12.6 percent in Q3-2023. This performance is due to the interest income generating capacity of banks' loan portfolios, and the relatively low cost of retail funding, paired with stable loan loss provisioning. Banks' capital results could reflect overestimation since share buy-backs and potential shifts in the composition of liabilities, e.g., migration from sight-to-term deposits, are excluded from consideration.
- 24. SIs display resilience in the aggregate under the adverse stress test scenario, albeit with significant credit deleveraging and evidence of a weak tail of banks (Figure 22 a,b). Two SIs do not meet their Capital Conservation Buffer (CCB) and Other Systemically Important Buffer (O-SII) with one also breaching the leverage ratio requirement. At an aggregate level, the CET1 ratio of the 10 SIs declines up to 3 percentage points, to 9.6 percent at end-2025, with a peak of losses in

² The stress test exercise is based on the model described in Tressel and Ding (2021).

³ (Cash and Cash Equivalents)/(Short-Term Liabilities or Current Liabilities).

 $^{^4}$ ICR is calculated as Earnings Before Interest and Taxes divided by Interest Expenses. When the ICR is less than one, a company is not generating sufficient revenue to service its debt without taking corrective actions.

⁵ A firm's debt is "at risk" if its ICR drops below one.

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the second year, and recovers to just over 10 percent by end-2026, due to a slight decline in RWAs and more contained losses in the last year. While on an aggregate average basis, the 10 SIs' capital levels remain above regulatory requirements, this owes materially to the significant scale and rapid speed of deleveraging of domestic credit exposures that is undertaken by banks under the adverse scenario (Table 5; Figure 20).6 Without such deleveraging, the solvency of more banks on a risk weighted basis would likely have been threatened. The overall macroeconomic costs of most SIs maintaining adherence to minimum capital requirements under the adverse scenario are pushed up by them pruning their balance-sheets to absorb losses, which puts them in a poor position to meet credit demand.

25. Solvency stress tests indicate that under the adverse scenario:

- Loan loss provisions (LLP) are the key factor underpinning the reduction in bank profitability (Figure 22 c-f), with the majority of credit risk impairments recorded in foreign portfolios. This reflects the fact that shocks to relevant risk factors considered in the FSAP's adverse scenario have a global range and, as a result, inhibit the diversification benefits from banks' international business.
- The increase in interest rates allows banks to initially attenuate the impact of credit losses, but this mitigant wanes during the last two years (Figure 22 c-f). NII grows in the first year due to the interest rate pass-through differential between assets and liabilities, especially on domestic exposures. Subsequently, this attenuative effect of NII decreases due to protracted negative credit growth in Spain and increasing non-performing exposures in both domestic and foreign loan books.
- Market risk losses are material only in the first year of the adverse scenario, and gains on securities contribute positively to banks' results in the outer years as rates start to normalize (Figure 22g).
- Alternative calibrations of pass-through of interest rate shocks to domestic loans and 26. deposits rates have at most modest impact on SIs' solvency (Figure 22h). Lowering pass-through to assets or increasing them for deposits—under any of the alternative approaches causes one more CET1 breach, while a milder pass-through on deposits does not affect the results.
- 27. Against this backdrop, the authorities should deploy policies to ensure that banks raise usable capital buffers to be better positioned against downside tail risks. Stress test results indicate that an increase in profit retention by banks in the immediate term, when profitability is high and is projected to remain robust under the baseline, would have material economic payoff should downside tail risks materialize since their larger capital buffers would permit them to better satisfy credit demand and mitigate macroeconomic costs. The FSAP recommends that authorities deploy policies, including but not necessarily limited to, the introduction of a

⁶ In the adverse scenario, domestic credit exposures of SIs fall in line with Table 5. This entails deleveraging, but no further feedback loop or second round effect between banks' performance under the adverse scenario and subsequent credit growth is considered.

positive neutral CCyB rate to ensure that banks raise capital buffers to be better positioned against downside tail risks.

Liquidity

28. The structural liquidity analysis assesses the resilience of the 10 SIs to funding shocks and market-driven stress. It is based on the intensity of use of LCR buffers under stress and more granular cash-flow (CF) analysis that evaluates banks' capacity to handle cash outflows over one week and three months under a wide range of scenarios. Analysis of SIs' use of their LCR buffers is based on four scenarios (chart), ranging in severity from the Basel III LCR (benchmark) to loss in

market valuation of (liquid) assets and a spike in funding outflows (intermediate), and finally, to a severe stress scenario ("aggressive"), which

LCD Streeted factors rates and baircute		Scenario					
LCR Stressed factors, rates, and haircuts	Basel	Market	Outflow	Aggressive			
Haircuts on liquidity buffers							
Roll-off rates on inflows							
Run-off rates on Outflows							
Note: a green cell indicates regulatory weights, red cell indicates "stressed" weights.							

combines the two intermediate scenarios. Both outflow and aggressive scenarios entail withdrawal of a material share of retail, including insured, deposits. The CF analysis considers a range of 25 scenarios affecting haircuts, runoff rates and rollover rates of maturing obligations—a liquidity gap arises when a bank exhausts its counterbalancing capacity to fulfill cash outflows.

29. Sls' demonstrate robust resilience-to-liquidity-stress even under the more aggressive stress scenarios.

The 10 SIs appear well-positioned to absorb liquidity shocks from market-driven stress, albeit their use of liquidity buffers would increase significantly if faced with an abrupt spike in funding outflows (Text Table; Figure 23). The aggregate LCR of Spanish SIs falls below the regulatory hurdle rate of 100 percent under the outflow and aggressive scenarios, with seven SIs needing to utilizing liquidity buffers sufficiently to have their LCR fall below 100 percent under the most severe scenario.

Spain: Number of Banks With LCR Falling Below 100 percent for Each Scenario							
Scenario	Basel III	Market	25% Outflow	50% Outflow	75% Outflow	100% Outflow	Aggressive
#Banks	0	0	0	1	2	6	-

CF analysis demonstrates that in the aggregate, SIs would maintain a marginal liquidity surplus under the aggressive scenario over a 1-week horizon while having a small shortfall over the three-month period (Figure 24 a,b). Three banks have a marginal liquidity shortfall in the one-week cash flow at the "aggressive" scenario severity while this number increases to four banks (66 percent of the banking sector by assets) for the three-month horizon. Withdrawal of wholesale funds, reflecting more conservative calibration, is the largest source of cash outflow, albeit its overall impact on SIs' liquidity under stress is attenuated by the fact that retail deposits are the preeminent source of bank financing (Figure 10e).

Liquidity-Solvency Interactions

- 30. For banks which do not comply with the LCR requirement, the FSAP analyzed the implications of liquidity stress spillover to banks' solvency. If the breach of the LCR requirement by the six SIs in the outflow scenario were to constitute an obstacle to their accessing ECB's standing liquidity facility⁷ and BdE's emergency liquidity assistance (ELA) is not provided to them, this could compel them to sell government bonds held at amortized cost in the market to meet funding withdrawals. This would result in losses being realized on those bond sales where the market value is lower than the book value.8 Such loss of access to central bank funding resulting in forced selling of bonds would constitute an extreme event.9
- 31. Banks would be able to withstand losses from forced liquidations should an idiosyncratic liquidity-to-solvency situation materialize under the adverse scenario. Assuming that SIs breaching the LCR under the outflow scenario sell all unencumbered sovereign debt at market value, potential sale losses are estimated to induce a median decline in firm-level CET1 ratio of between 1.3 and 3.5 percentage points. Importantly, by prioritizing the sale of bonds with lower maturity, banks could liquidate up to half of their portfolios with less than one quarter of these loss estimates (Figure 22 i,j).¹⁰

D. Interconnectedness Analysis¹¹

- 32. Cross-border bank contagion analysis shows that the spillover of distress between Spanish and foreign banks is modest (Figure 25). This reflects the fact that a majority of the cross-border claims of Spanish banks are to customers other than banks (Figure 12e).
- 33. Domestic interbank contagion analysis shows that vulnerability to interbank contagion is small (Figure 26). The FSAP examined the implications on bank solvency of hypothetical distress at individual domestic banks. The focus on contagion among 16 domestic banks (SIs and LSIs) and two foreign subsidiaries is in line with the dominant role of the banking sector demonstrated by the schematic cross-sector network map of the domestic financial system Figure 26 e,f). The results are in line with the modest share of interbank exposures of Spanish banks.

⁷ To assess whether a bank is financially sound, which is a precondition to access ECB facilities under normal policy operations, the ECB takes into account prudential information on capital, leverage and liquidity ratios, as detailed in the Guidelines EU 2015/510. Over the one-year horizon of the liquidity-solvency interaction, all SIs continue to meet their solvency requirements.

⁸ For the estimate, the team FSAP considered bonds issued by euro area sovereigns which are unencumbered at the cutoff date, constituting 39 percent of the entire bond portfolio, for a total carrying amount of EUR 105 billion.

⁹ A breach of prudential requirements does not immediately preclude access to the ECB's standing facilities, as a grace period may be granted. Even if ELA is provided by National Central Banks in a discretionary manner in the EA, loss of access to ELA is also a severe assumption for SIs in such circumstances. In addition, even in the absence of access to the ECB's standing facilities and ELA, a bank may continue to obtain liquidity using EA sovereign bonds as collateral in cleared repo, where counterparties maintain anonymity, albeit at a cost of higher haircuts.

¹⁰ Unrealized losses for the amortized cost securities have been quantified using the adverse scenario (including higher term premia during the first year of the stress test).

¹¹ Both approaches included a credit shock and a funding shock following the methodology outlined in Espinosa-Vega and Solé (2010).

FINANCIAL SECTOR OVERSIGHT

34. Significant progress has been made in implementing the 2017 FSAP recommendations in key areas, but some gaps remain (Table 6). For example, Spanish banks have reduced their stock of NPLs under close supervisory scrutiny, albeit improving governance of LSIs remains a workin-progress and legislative initiatives to facilitate the soundness and governance of cooperative banks are still pending.

Macroprudential Framework and Policies

- 35. The framework for macroprudential policy has been significantly reinforced in recent years and further steps are suggested to enhance the Spanish Macroprudential Authority Financial Stability Council's (AMCESFI) transparency, impact, and accountability. Addressing a key recommendation from the 2017 FSAP, the authorities established a new high-level macroprudential authority, the AMCESFI in 2019. AMCESFI brings together the principal financial and regulatory authorities (the BdE, CNMV, DGSFP, and MINECO).¹² Besides responsibility for systemic risk oversight and for ensuring effective policy coordination, AMCESFI has powers to issue warnings and recommendations on financial stability issues, and opinions on policy measures proposed by the sectoral regulators, even as the latter retain final responsibility for policy approval and implementation. While substantially strengthening the institutional framework, AMCESFI has a relatively low profile. AMCESFI's role, credibility, transparency, and accountability would be further reinforced by more frequent meetings of its Council—quarterly rather than a minimum of twice a year—and by publishing summary minutes of meetings as well as timely Annual Reports. Appointing external members would also strengthen the diversity of perspectives and expertise and help to guard against potential inaction bias.
- 36. With frameworks for systemic risk identification having been further upgraded and the set of policy instruments available to the authorities enhanced, some additional steps will further bolster risk analysis and financial stability policy implementation.
- Systemic risk identification in Spain uses advanced methods and approaches; tools to address systemic risks have been supplemented by additional borrower-based measures for the banking sector, (as recommended by the 2017 FSAP), and by instruments tailored to risks in specific sectors; and enhancements have been made to address risks from NBFI more effectively.
- Steps that will further bolster analysis and policy implementation include: (a) continuing investments in improving data and information in key areas, such as borrower income and cross-border exposures of investment funds operating in Spain (the latter through contributions to discussions at the EU and global levels);13 (b) exploring scope for more cross-agency work on

¹² DGSFP is the Directorate in MINECO responsible for insurance and pension funds and has a separate seat on the Council.

¹³ At the European level, this includes, notably, the need to close information gaps so as to enhance the oversight of cross-border operations of investment funds marketed in one jurisdiction but domiciled in another jurisdiction, an issue which could be considered in the forthcoming EA FSAP.

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- selected cross-sectoral topics from a financial stability perspective, e.g., the impact on system wide liquidity risks from the recent switch in household deposits to insurance products and investment funds, business model risks from trends in bancassurance, and new areas like cyber risk.
- The set of available macroprudential policy tools for addressing banking sector risks is broad and well-integrated with risk monitoring. While the set of tools to address systemic risks from investment funds is also extensive by international standards, policy formulation and application is hampered by a shortage of information on fund behavior and practices, such as the absence of specific reporting on the activation of liquidity management tools. Continuing development of the policy framework for risks from NBFI would be enhanced by stronger reporting requirements that ensure that the CNMV and DGSFP are immediately notified of the activation of policy tools in the hands of fund managers, investment firms, and insurance companies domiciled in Spain. Data issues are compounded when funds are marketed in Spain while being domiciled in another EU country. In the case of funds operating cross border, addressing information gaps would require measures to be taken at the EU level. Moreover, enhanced capability to monitor fund and firm behavior under stressed conditions is essential to facilitate judgements of whether the tools available to the regulator to handle extreme conditions should be activated.
- **37**. The FSAP welcomes the BdE's ongoing work on, and supports adoption of, a positive neutral CCyB rate as soon as feasible, as well as recommending streamlining of procedures to promote faster implementation. Apart from application of higher capital buffers for systemically important institutions, no other instruments have been deployed. The CCyB has remained at zero percent since inception in 2016, and no sectoral or borrower-based measures have been introduced. The BdE is actively considering the case for introducing a positive neutral CCyB rate which would provide additional resilience to ensure that banks have higher usable buffers and can continue lending to the real economy in the event of adverse structural shocks. The FSAP welcomes this work and supports adoption of a positive neutral buffer as soon as feasible. To shorten the implementation lag, there also appears scope to simplify and streamline the administrative and consultation procedures that have to be followed by the BdE before final decisions to activate macroprudential tools can be taken.

B. Banking Supervision and Regulation of LSIs

- 38. The FSAP undertook a targeted review of the regulation and supervision of Spain's banking LSIs. In scoping this targeted review, previous FSAP recommendations and relevant EA and global regulatory and market developments were considered. While significant progress has been made to enhance LSI regulation and supervision, some of the previous FSAP recommendations remain to be implemented.
- 39. The BdE has a broad range of supervisory and corrective powers, but establishing key additional safeguards would serve to secure its operational independence. Those safeguards include the removal of MINECO's appeal powers vis-à-vis BdE supervisory decisions and sanctions and limiting the role of official political representatives on the BdE's Governing Council in relation to decisions on supervisory issues and sanctions. The BdE should be granted greater autonomy in issuing prudential regulations in areas not harmonized at the EU level (such as the framework for related party transactions which, in Spain, is not aligned with Basel Standards).
- 40. While BdE's supervisory activities focus on relevant LSI risks and vulnerabilities, the effectiveness of its risk-based supervisory approach could be enhanced by increasing targeted and thematic onsite activities and streamlining offsite processes. BdE has relied on thorough offsite analyses and a horizontal monitoring system providing a wide range of information on the performance and vulnerabilities of LSIs. However, there is scope to further streamline the alert-based offsite system by reducing overlaps between the various indicators and to better integrate this system in supervisory planning. The risk-based aspects of BdE's supervisory approach would be enhanced by performing more frequent, targeted onsite activities for medium-andhigh-risk and medium-and-high-impact LSIs, conducting thematic onsite activities for selected topics, and applying more proportionality for some strenuous offsite processes, such as the Supervisory Review and Evaluation Process (SREP) which is performed annually for all LSIs. The BdE should generally ensure that it has adequate resources on a forward-looking basis.
- 41. Performing additional onsite activities remains key to further improving LSIs' governance and risk management. While the BdE has made significant progress, it should continue following up on LSIs' governance by performing targeted and thematic onsite activities. The BdE should also further increase its onsite supervisory scrutiny of LSIs' risk management, particularly the management of liquidity risks and interest rate risk in the banking book (IRRBB). Reform is needed to enhance the related-parties framework and address gaps relative to international standards. BdE's proactive approach to climate-related financial risks should continue to ensure that the assessment of these risks becomes embedded in supervisory activities and processes. The BdE should also take into account excessive concentration risk for a broader range of exposure types, including sovereign risk concentration, through Pillar 2 requirements for LSIs.

C. Supervision and Oversight of Financial Market Infrastructures

42. The FSAP focused on selected topics of regulation, supervision, and oversight of two systemic FMIs. This scope included the responsibilities of the authorities in the supervision and oversight of the CCP—BMEC, and the CSD—IC, under the Principles for Financial Market

Infrastructures (PFMIs); the CNMV's supervision of BMEC's margining practices; and the supervision of crisis management procedures of BMEC and IC.

- 43. According to Spanish Law, the CNMV and BdE are responsible for ensuring that the national securities clearing, settlement and registry systems operate in a manner consistent with maintenance of financial stability. The CNMV, as supervisor of BMEC and IC, has sufficient powers to deliver on its responsibilities under the PFMIs, which in the EU are transposed by the European Market Infrastructure Regulation and the Central Securities Depository Regulation. The BdE acts as overseer of BMEC and IC.
- **44.** The CNMV's supervision of BMEC and IC is of high quality despite significant resource constraints. The CNMV is a proactive supervisor that has a high level of engagement with market participants and FMIs. However, it lacks full autonomy over its recruitment of supervisors, including in key specialist areas due to significant uncertainties associated with government approval needed on a case-by-case basis. These resource constraints will increase the challenge of effective oversight as pressures from new responsibilities and regulatory requirements will increase going forward. The FSAP recommends providing the CNMV full functional autonomy over its recruitment process.
- 45. The CNMV's supervision of BMEC's margining practices is comprehensive and thorough, and the few enhancements identified by the FSAP would make it even more robust. The CNMV should ensure that its recommendations to BMEC are implemented in timely fashion and, to the extent possible, that enhancements to the margin models to address CNMV's recommendations are implemented in all segments. In addition, the results of the sensitivity analysis should also be disclosed to clearing members.
- 46. The CNMV performs extensive periodical reviews of the crisis management procedures for BMEC and IC and the FSAP recommends strengthening some aspects of the respective recovery plans. The CNMV has worked closely with BMEC in the preparation of their recovery plan and thoroughly supervises it, including the tools and the severity of the recovery scenarios, and periodically reviews IC's recovery plan. The FSAP recommends that the CNMV request an improvement on IC's plan narrative in areas such as the results of the materialization of the recovery scenarios, and the consequences of situations where several scenarios occur simultaneously. As both FMIs belong to a foreign financial group, CNMV should ensure adequate ongoing supervisory coordination with the home supervisor, including through joint crisis simulation exercises.

D. Cyber Resilience

- **47.** The FSAP reviewed the regulation and supervision of cyber risk at the Spanish LSIs and FMIs. Given the existing threat landscape, technology risk and cyber resilience of the financial system have become key focus areas for financial supervisory authorities, within the broader context of operational resilience, as evidenced by their inclusion within the set of 2023 supervisory priorities of the BdE and the intensification of cyber risk oversight activities in recent years by the CNMV.
- **48.** The legal basis and relevant regulations convey adequate powers to effectuate cyber risk supervision. There are sufficiently broad powers regarding collection of information in any form on any relevant matter; to assess compliance; to impose corrective actions directed at

supervised institutions and FMIs to rectify matters within reasonable timeframes; and to impose sanctions and take enforcement action as a last resort to ensure compliance.

- Cyber risk supervisory practices of the authorities vis-à-vis LSIs and FMIs reviewed by the FSAP are materially in line with applicable regulations, guidance, and prevailing international good practice. Key strengths include: (i) clear and well communicated supervisory expectations; (ii) an effective risk-based approach and application of proportionality in supervision; (iii) horizontal reviews by the BdE as regards LSIs; (iv) the strong emphasis on evidence-based, onsite examinations by the BdE and the thorough and detailed offsite oversight process at the CNMV and the BdE; (v) the strong emphasis on security testing; (vi) the proactive approach to changes in the regulatory framework, for example to ensure future DORA compliance; and (vii) effective internal coordination and cooperation at the BdE and the CNMV.
- 50. **Resource constraints are the most prominent challenge for authorities.** The need for resources, already stretched at the BdE and inadequate at the CNMV, will increase as new regulations come into force in the near future. The authorities should address the need for a higher cyber risk specialist headcount taking into account current gaps (e.g., no onsite examinations of FMIs, limited coverage of LSIs) and the projected future workload.
- Further recommendations include: (i) the BdE and CNMV should execute onsite examinations as part of FMI supervision; (ii) the BdE should conduct more, and more focused, thematic reviews while maintaining short on-site visits to a sample of LSIs; (iii) the BdE should develop a lighter threat intelligence-based red teaming framework based on TIBER-ES principles, considering the generally lower complexity, maturity and cost-bearing ability of a typical LSI; and (iv) both the BdE and CNMV should be involved in national critical infrastructure related matters, such as designation and compliance assessments as they are both in a very good position to address the complexities of continuity of critical services in the financial sector.¹⁴

E. Fintech Developments and Oversight

- 52. The authorities rely on a range of tools for effective supervision and monitoring of fintech developments. Apart from operating a sandbox and an Innovation Hub, the financial sector authorities conduct ad-hoc horizontal assessment and thematic studies on emerging fintech issues while facilitating development of a database of fintech companies in Spain.
- The inter-agency sandbox is an important tool for supervisory monitoring and 53. evaluation of fintech innovations and communication of supervisory expectations to promoters. The sandbox is operated by an inter-agency Coordination Commission including the

 $^{^{14}}$ The BdE and CNMV do not officially know which institutions under their supervision are classified as critical operators or what infrastructures are designated as critical by the Spanish National Centre for the Protection of Critical Infrastructure (CNPIC) from a national critical infrastructure protection perspective.

Treasury, the three financial supervisory authorities (BdE, CNMV, DGSFP), SEPBLAC, and the Data Privacy Authority. Experience through six cohorts of applicants moved into and through the testing process has provided significant supervisory learning and effective communication of supervisory expectations to promoters. While the sandbox is viewed as a tool to support supervisory intelligence gathering, evaluation and oversight of projects applying for testing inevitably requires investment of supervisory resources.

54. A better balance between the benefits of the sandbox and its significant supervisory costs could be achieved by considering some changes to its operational arrangements. In a context of stretched supervisory resources at both the BdE and CNMV, the sandbox is not an economical tool. Supervisors spend a significant amount of time in testing and preparatory phases which can have a combined average length of greater than 10 months. The rates of acceptance and post-testing take-to-market of projects are low and promoters occasionally exit testing midway, after significant supervisory resources have been expensed on their applications. The legislation establishing the operation of the sandbox does not provide flexibility regarding the semi-annual frequency of new cohorts, nor to the supervisory authorities in making a decision on whether individual applications could be equally or better served via lower costs alternatives. Against this background, legislative changes should be considered to delegate powers to the Coordination Commission and the regulators to modify the sandbox's operational arrangements; administrative procedures could be streamlined; and greater flexibility should be extended to supervisory authorities to rely on their wider range of tools to monitor market developments, convey supervisory expectations, and assess the adequacy of the regulatory perimeter.

F. Financial Integrity

- Spain has a mature framework for Anti-Money Laundering and Countering the 55. Financing of Terrorism (AML/CFT); hence, the FSAP focused on a targeted review aimed at spotlighting areas for further strengthening with an eye on evolving risks. The framework was recently strengthened through legal amendments that implement the new set of EU-wide AML/CFT directives and regulations. There are some areas where action to further improve the AML/CFT system would ensure that it remains robust as risks continue to evolve. For example, Spain's approach to beneficial ownership transparency is well regarded internationally, albeit there is scope to further strengthen its centralized beneficial ownership registry (CBOR), established in September 2023. The CBOR relies on input from other pre-existing registries, including that managed by the notarial sector, and in this regard, authorities should ensure that data remain accurate and up-todate in accordance with international standards.
- Spain has an established AML/CFT supervisory framework that implements the risk-56. based approach, but certain sectors could be subject to closer scrutiny by the authorities. In line with the findings of the National Risk Assessment (NRA), which has been updated in 2024, the authorities should devote greater attention to the implementation of AML/CFT controls by professional enablers, such as lawyers and accountants. Given the central prevention role of the notarial sector, SEPBLAC should complement the AML/CFT oversight carried out by the General Council of Notaries with direct thematic reviews of customer due diligence and record keeping

processes. The authorities should further deliver on their plans to step up registration enforcement and onsite inspections on a risk-based basis over the Virtual Asset Service Providers.

57. Spain keeps its NRA up-to-date, but it should proceed with its plans to introduce a dedicated AML/CFT strategy and take additional steps to ensure continued focus on emerging risks. The 2020 NRA is currently being revised with the update expected in 2024. As the methods used to launder the proceeds of criminal activities and to finance illicit activities are in constant evolution, the authorities should continue implementing, and adjust where necessary, their multifaceted measures, including the ongoing analysis of cross-border flows in the banking sector, to ensure that Spain's exposure to transnational risks, e.g., from illicit financial flows, organized crime, complex international structures, and the Golden Visa Program, remain well understood and adequately mitigated. Spain should proceed with its plans to introduce a dedicated AML/CFT strategy. The FSAP also recommends timely completion of the formal process necessary to share the Sectoral Risk Assessment on Cryptoassets that was approved in July 2023.

FINANCIAL SAFETY NET AND CRISIS MANAGEMENT

- 58. The FSAP examined the Spanish financial safety net and crisis management arrangements, including bank resolution and contingency planning. The BdE and Spain's Executive Resolution Authority (FROB) currently share the resolution authority mandate for banks. In addition to noting significant progress since 2017, the FSAP identified further work to ensure that the resolution regime is fully operational.
- 59. The statutory foundations underlying Spanish arrangements are sound. The Banking Recovery and Resolution Directive and Single Resolution Mechanism Regulation establish a comprehensive statutory regime. The authorities have made good progress in establishing an effective crisis management and resolution regime since the previous FSAP. They have also supported the Single Resolution Board in setting resolution plans for SIs and agreed on resolution plans for LSIs; enhanced cross-authority coordination; developed crisis management manuals; and participated in crisis simulation exercises.
- The Spanish statutory resolution regime needs to be refined to ensure it is fit-for-60. purpose. The FROB should be provided with the administrative resolution power to override shareholders and management rights and take control of a bank subject to a bail-in resolution without needing to appoint a special manager or demonstrate "reasons of special urgency". Bank liquidators should be provided with the power to transfer deposit accounts backed by bank loan assets out of liquidation and to an acquirer where one has been identified. Expanding the set of resolution options available to authorities should also be considered by transposing the government stabilization tools as a last resort option in a manner that is allowed under European law.
- 61. Preventative and executive resolution authority functions should both be vested in the same authority. This will ensure that the authority responsible for implementing orderly resolution actions has control over the primary levers necessary to achieve its objectives, thereby aligning incentives with responsibility.

The BdE should establish an approach to addressing liquidity needs for banks 62. recapitalized through the resolution process.¹⁵ The mission recommended that: (a) the BdE put in place a policy framework on its role as lender of last resort; and (b) ensure operational capability, including by establishing testing arrangements to verify the effectiveness of its crisis lending capabilities, covering ELA and liquidity in resolution lending arrangements, and by assessing liquidity needs of banks as part of firm-specific resolution planning processes. All banks seeking access to any central bank liquidity facility need to meet eligibility criteria including solvency requirements.

AUTHORITIES' VIEWS

- 63. The authorities greatly valued the FSAP engagement and the cooperative spirit in which the discussions were held. They appreciated the constructive exchanges of views with the team and the in-depth assessment of systemic risks.
- 64. The authorities broadly agreed with the systemic risk assessment. They noted that the FSAP's findings were largely in line with their own assessment. They nuanced the argument that diversification benefits from banks' international business may be limited when risk factors have a global range. They were of the view that the forced sale scenario considered as part of the liquiditysolvency interaction analysis was unrealistic. They also noted that deleveraging in the adverse scenario is not that significant and is only one option among others that could be used by banks to maintain their solvency and, therefore, the resulting macroeconomic costs should not be overemphasized. The elevated macroeconomic impact is based on assumptions to generate the stress scenario, and only a fraction of this impact on GDP growth can be associated with credit deleveraging. Regarding banks' voluntary capital buffers, they explained that other banks in the EA have also chosen to issue high dividend payouts and buy-back shares over retaining earnings.
- 65. The authorities were supportive of most recommendations and emphasized their commitment to strengthen resilience in the financial sector. They welcomed the recommendations to improve the macroprudential framework and tools. The CNMV noted, however, that addressing data gaps to improve the supervision of open-ended funds requires measures to be taken at the EU level given the common practice of funds marketed in a given jurisdiction are domiciled in another one. While noting the lack of specific reporting on the activation of liquidity management tools, the CNMV also emphasized that it has a permanent and close engagement with asset managers in crisis situations. Regarding banking resolution and crisis management, the authorities broadly agreed with the main recommendations but felt that liquidity needs of banks that have been recapitalized through the resolution process should be addressed at the EA level, and not at a national level, since a common approach is needed.

¹⁵ This would complement efforts at the European level to arrive at a common approach to addressing liquidity needs of banks that have been recapitalized through the resolution process, an issue that could be considered in the forthcoming FSAP of the EA.

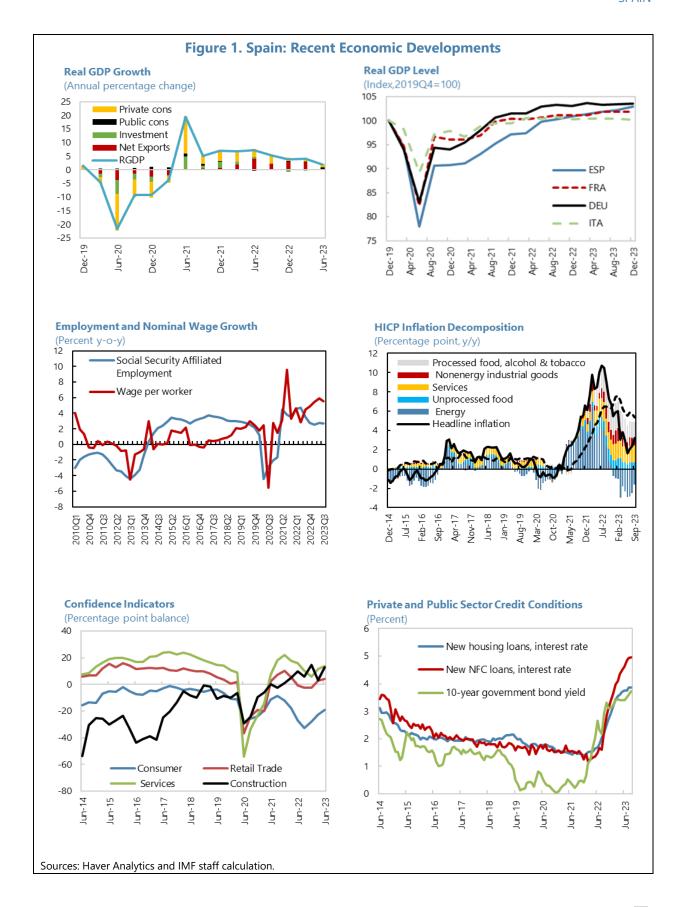
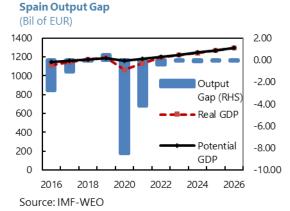


Figure 2. Spain: Economic and Financial Cycle

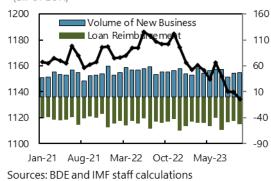
The gap between actual GDP and potential GDP closed in 2023 and the Spanish economy is exptected to grow near its potential.

its potential.



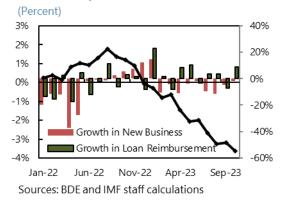
Outstanding loans started contracting at the end of 2022...





...with credit growth of -4 percent in 2023Q3.

Loans to HHs, NPISHs and NFCs



The credit to GDP gap remains in negative territory and on a downward trend.

Spain Credit to Cycle Indicators

(Mil of EUR (LHS), percent)

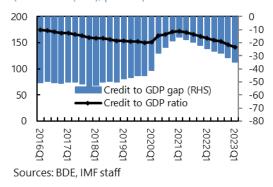


Table 2. Spain: Main Economic Indicators

(Percent change unless otherwise indicated)

							Project	ions 1/		
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Demand and supply in constant prices										
Gross domestic product	-11.2	6.4	5.8	2.5	2.4	2.1	1.8	1.6	1.6	1.6
Private consumption	-12.3	7.1	4.7	1.8	1.8	1.9	2.3	2.3	2.3	2.3
Public consumption	3.6	3.4	-0.2	3.8	0.9	1.2	0.5	0.4	0.4	0.4
Gross fixed investment	-9.0	2.8	2.4	0.8	4.5	4.8	2.2	1.8	1.6	1.6
Total domestic demand	-9.2	6.7	3.0	1.7	2.2	2.4	1.9	1.8	1.7	1.7
Net exports (contribution to growth)	-2.2	-0.2	2.9	0.8	0.0	-0.2	-0.1	-0.1	-0.1	-0.1
Exports of goods and services	-20.1	13.5	15.2	2.3	3.4	3.1	3.1	3.2	3.2	3.2
Imports of goods and services	-15.0	14.9	7.0	0.3	3.0	4.0	3.6	3.7	3.6	3.6
Real GDP per capita	-11.6	6.5	5.1	2.1	1.2	1.0	0.7	0.6	0.7	8.0
Savings-Investment Balance (percent of GDP)										
Gross domestic investment	20.5	21.6	21.5	20.3	21.0	21.8	21.9	21.9	21.8	21.7
Private	17.8	18.9	18.7	17.4	18.1	18.6	18.8	19.4	19.4	19.3
Public	2.7	2.7	2.8	2.9	2.9	3.2	3.1	2.5	2.3	2.4
National savings	21.1	22.4	22.1	22.9	23.6	24.0	23.9	23.8	23.6	23.5
Private	28.5	26.4	24.0	23.6	23.7	23.7	23.9	24.4	24.2	24.1
Public	-7.4	-4.0	-1.9	-0.7	-0.1	0.3	0.0	-0.7	-0.6	-0.6
Foreign savings	-0.6	-0.8	-0.6	-2.6	-2.6	-2.3	-2.0	-1.9	-1.8	-1.8
Household saving rate (percent of gross disposable income)	17.4	13.8	7.6	11.7	10.4	7.9	7.9	7.9	7.9	7.9
Potential output	-2.5	1.6	1.7	1.9	2.1	2.2	1.8	1.7	1.6	1.6
Output gap (percent of potential output)	-8.5	-4.2	-0.4	0.2	0.4	0.2	0.1	0.0	0.0	0.0
Prices										
GDP deflator	1.1	2.6	4.2	5.9	2.8	2.3	1.7	1.7	1.8	1.8
Headline inflation (average)	-0.3	3.0	8.3	3.4	2.9	2.3	1.9	1.8	1.8	1.8
Headline inflation (end of period)	-0.6	6.5	5.5	3.3	2.5	2.1	1.8	1.8	1.8	1.8
Core inflation (average)	0.6	0.7	5.2	5.8	3.0	2.1	1.8	1.8	1.8	1.8
Core inflation (end of period)	0.1	2.1	6.7	4.6	2.5	2.1	1.8	1.8	1.8	1.8
Employment and wages										
Unemployment rate (percent of total labor force)	15.5	14.9	13.0	12.2	11.8	11.5	11.2	11.2	11.2	11.2
Labor productivity 2/	-5.0	-0.6	2.0	-0.7	1.0	1.1	0.9	1.2	1.3	1.4
Labor costs, private sector	4.0	0.0	2.6	5.6	3.3	3.5	2.8	3.0	3.1	3.1
Employment	-2.9	3.3	3.6	3.1	1.3	0.9	0.8	0.4	0.3	0.2
Labor force	-1.3	2.5	1.4	2.1	0.8	0.6	0.5	0.4	0.3	0.2
Balance of payments (percent of GDP)										
Trade balance (goods and services)	1.4	1.0	1.2	4.1	4.0	3.5	3.2	3.0	3.0	2.9
Current account balance	0.6	0.8	0.6	2.6	2.6	2.3	2.0	1.9	1.8	1.8
Net international investment position	-84.9	-71.0	-60.0	-52.8	-46.5	-41.4	-37.1	-33.8	-30.7	-27.7
·										
Public finance (percent of GDP)	-10.1	6.7	-4.7	-3.6	-3.0	-2.9	2.1	-3.1	-2.9	-3.0
General government balance Primary balance	- 10.1 -8.1	-6.7 -4.8	-4.7 -2.6	-3.6 -1.8	-3.0 -0.6	-2.9 -0.3	-3.1 -0.4	-3.1 -0.4	-2.9 -0.3	-3.0 -0.3
Structural balance	-6.1 -4.9	-4.0 -4.1	-2.6 -4.5	-1.o -3.7	-3.2	-3.0	-3.2	-0.4 -3.1	-0.3	-3.0
Primary structural balance	-4.9 -2.7	-4.1 -2.0	-4.5 -2.2	-3.7 -1.3	-3.2 -0.6	-0.2	-3.2 -0.2	-3.1 -0.2	-3.0	-3.0
General government debt	120.3	116.8	111.6	107.7	105.6	104.4	104.3	104.2	103.7	103.2
	120.3	110.0	111.0	107.7	103.0	104.4	104.3	104.2	103.1	103.2
Memo item										
Credit to the private sector	2.6	0.6	-0.1	-3.2	0.0	0.5	1.0	2.0	2.0	1.9
Nominal GDP (Millions of euros)	1119.0	1222.3	1346.4	1461.9	1538.0	1606.0	1661.6	1717.9	1777.1	1838.2

Sources: IMF, World Economic Outlook; data provided by the authorities; and IMF staff estimates.

^{1/} The projections incorporate spending financed by the EU Recovery and Resilience Facility (including the grant and the loan component) amounting to about 0.4, 0.9, 1.0,

^{1.0, 1.0, 0.9,} and 0.2 percent of GDP from 2021 to 2027. 2/ Output per full-time equivalent worker.

Table 3. Spain: Risk Assessment Matrix					
		Overall Level of Concern			
Risk	Relative Likelihood	Expected Impact of Risks			
Intensification of regional conflict(s) and geo-economic fragmentation Escalation of Russia's war in Ukraine or other regional conflicts and resulting economic sanctions disrupt trade (e.g., energy, food, tourism, and/or critical supply chain components), remittances, refugee flows, FDI and financial flows, and payment systems.	High	 Medium Trade disruptions weigh on domestic activity. Shortages in critical supply chain components and rising energy and food prices further raise inflation. Intensification of conflicts in the Middle East and Africa leads to disorderly migration into Europe further deepening political division within the EU. 			
Abrupt global slowdown or recession that may trigger systemic financial instability Global and idiosyncratic risk factors combine to cause a synchronized sharp growth downturn, with recessions in some countries, adverse spillovers through trade and financial channels, and markets fragmentation. Sharp swings in real interest rates and risk premia could occur amid the economic slowdown. In Europe, intensifying fallout from the war in Ukraine, recurrent energy crisis and supply disruptions, and monetary tightening exacerbate economic downturns, and housing and commercial real estate market corrections. Policy errors could also act as an amplifier.	Medium	 High Tighter financial conditions in anticipation of a recession and weaker consumer confidence weigh on domestic activity. Slower growth by trading partners reduces external demand for Spanish exports through trade channels. The significant cross border presence of Spanish banks leads to adverse cross border spillovers through financial channels. Disorderly tightening of financial conditions leads to abrupt and significant bond repricing and housing market corrections. This, together with higher financing costs result in sharp deterioration of financial conditions of firms and households due to high share of floating rate debt in Spain. The associated adverse impact on banks' asset quality results in an erosion of banks' capital buffers, adversely affecting credit availability and economic activity. Adverse economic impact will be amplified if social tensions around economic adjustments emerge and erode trust in policy makers. The resulting political instability will challenge achieving political consensus on policies, including fighting inflation, thereby amplifying the impact of the domestic shocks. 			

Table 3. Spain: Risk Assessment Matrix (continued)					
		Overall Level of Concern			
Risk	Relative Likelihood	Expected Impact of Risks			
		 Adverse economic impact will be amplified if social tensions around economic adjustments emerge and erode trust in policy makers. The resulting political instability will challenge achieving political consensus on policies, including fighting inflation, thereby amplifying the impact of the domestic shocks. 			
A succession of supply disruptions (e.g., due to conflicts, uncertainty, and export restrictions) and demand fluctuations causes recurrent commodity price volatility, external and fiscal pressures in EMDEs, contagion effects, and social and economic instability. Monetary policy miscalibration	High	Medium Higher energy prices fuel inflation pressure and further raise inflation expectations. Export competitiveness of Spanish firms is adversely affected, which slows down activity. High energy prices have an adverse impact on vulnerable households, leading to lower domestic demand. Medium-High			
Amid high economic uncertainty and financial sector fragility, major central banks pause monetary policy tightening or pivot to loosen policy stance prematurely, deanchoring inflation expectations, triggering a wage-price spiral and spillovers to financial markets.	Medium	A cycle of higher inflation feeds into higher inflation expectations which then feeds back to higher inflation. Equity markets are affected as expectations suddenly shift, and inflation risk premia rises.			
Weak implementation of fiscal commitments, delays in EU funded projects or reassessment of sovereign risk Lack of or reversal of reforms in Spain. Shift in market perception in the EA undermines high-debt countries' ability to roll over and service debt.	Medium	 High Uncertainty about medium-term fiscal commitments in Spain or a shift in market sentiment against highly indebted EA countries weaken confidence and cause an increase in the sovereign risk premium which worsens public debt dynamics. Timely implementation of EU funded projects is seen as critical to safeguarding near-to-medium term growth. Increased sovereign yield spreads reduce the value of fixed-income assets, putting pressure on financial sector balance sheets and reducing the value of banks' liquid assets. 			

Table 3. Spain: Risk Assessment Matrix (concluded)					
		Overall Level of Concern			
Risk	Relative Likelihood	Expected Impact of Risks			
Extreme climate events driven by rising temperatures cause loss of human lives, severe damage to infrastructure, supply disruptions, lower growth, and financial instability.	Medium	Medium The occurrence of climate-related events (e.g., droughts, heatwaves, wildfires) disrupts banks and other financial institutions and infrastructures' operations, impairs borrowers' ability to repay debt or reduces the value of assets that are collateralizing debt. Climate-related events amplify supply chain disruptions and inflationary pressures, with additional negative effects on the economy due to second-round effects.			
Cyberthreats Cyberattacks on physical or digital infrastructure (including digital currency and crypto assets ecosystems) or misuse of AI technologies. Source: IMF staff.	Medium	 High Cyber-attacks trigger financial and economic instability. 			

Figure 3. Spain: Trends in Household and Corporate Leverage

Corporate and household sectors have reduced their debt level relative to GDP, extending a decade-long trend.

Corporate and Household Debt, 2008-2023



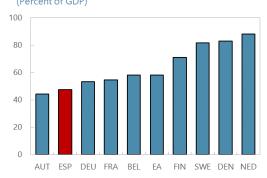
The leverage ratio of nonfinancial corporates has improved since the GFC.

NFC Leverage, 2008-2023

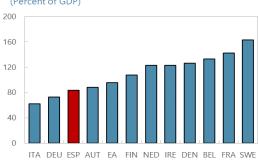


Household and corporate debt remain low compared to peers in the Euro Area.

House Debt, 2023Q2 (Percent of GDP)

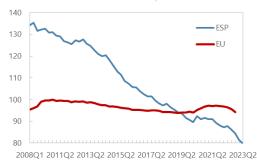


Corporate Debt, 2023Q2 (Percent of GDP)



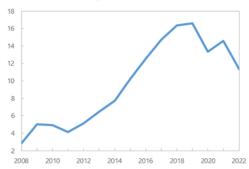
Deleveraging serves to increase households' debt servicing capacity

Household Debt-to-Income Ratio, 2008-2023



NFCs' debt servicing capacity has picked up again, after a brief deterioration during the pandemic.



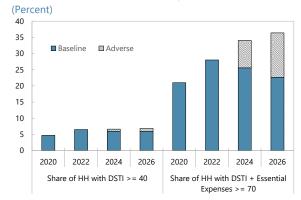


Sources: Bank of Spain, Haver Analytics, and IMF staff calculations.

Figure 4. Spain: Household Sector Vulnerability

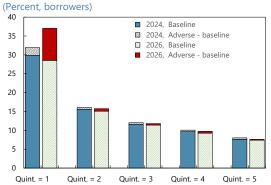
Household vulnerability will recover gradually from its peak in 2022, while vulnerability can increase again in the adverse scenario.

Share of Vulnerable Households 1/



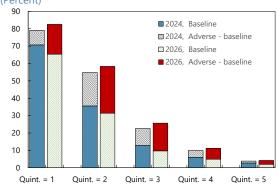
Lowest-income households are expected to see sizable increases in DSTI in the adverse scenario.

HH Debt-Service-to-Income-Ratio by Income Quintile 3/



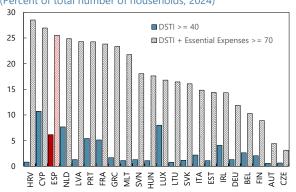
Commodity price spikes can create additional stress for households in the adverse scenario.

Share of Households at Risk (DSTI + Essential Exp.>=70) (Percent)



Overall household vulnerability is on the higher end compared to European peers.

Household at Risk by Different Vulnerability Standards 2/ (Percent of total number of households, 2024)



... the same applies to the share of households with DSTI greater than or equal to 40.

Share of Households at Risk (DSTI >= 40)

(Percent)

25

20

2024, Baseline
2024, Adverse - baseline
2026, Baseline
2026, Adverse - baseline
15

10

Ouint. = 1

Ouint. = 2

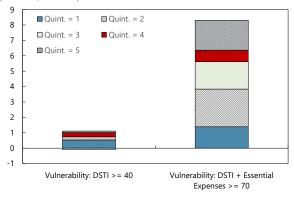
Ouint. = 3

Ouint. = 4

Ouint. = 5

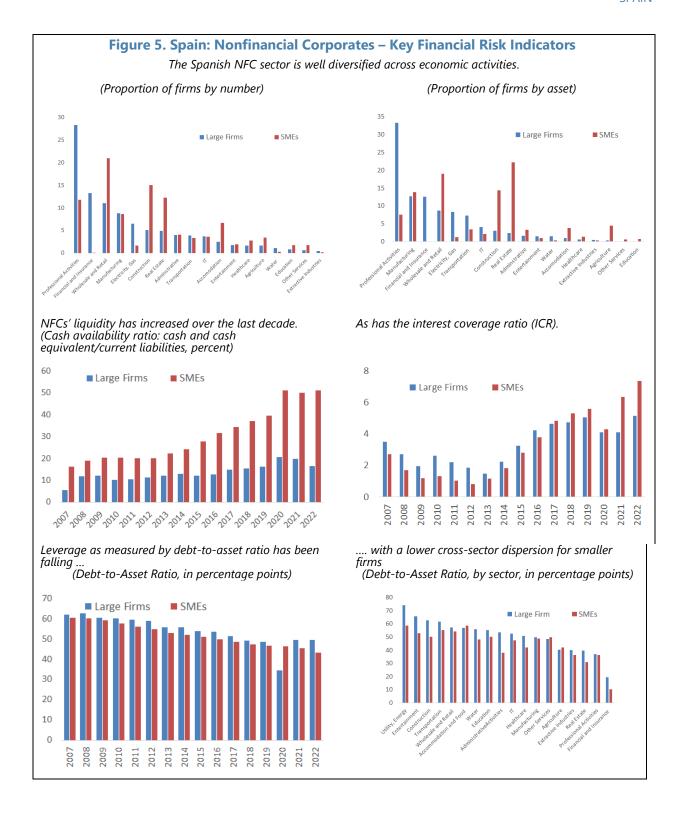
Middle-income households can contribute more to increases in household-debt-at-risk.

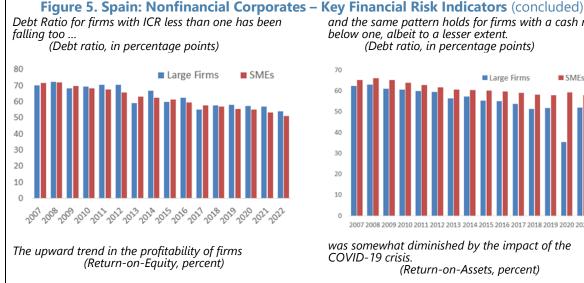
Contributions to Increases in Household Debt at Risk (Percent, in 2026)

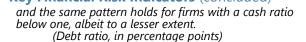


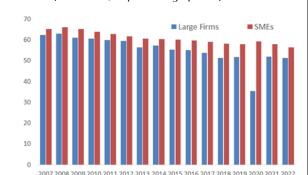
Sources: 2021 ECB Household Finance and Consumption Survey, BdE Survey of Household Finances, and IMF staff calculations. 1/2020 figures are actual data from BdE Survey of Household Finances; 2022, 2024 and 2026 are simulated based on actual macroeconomic development and projections from IMF October 2023 WEO.

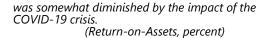
- 2/ Macroeconomic assumptions for individual countries are based on IMF 2023 October WEO projections.
- 3/ Income quintile 1-5 indicate the lowest-income group to the highest-income group.















Sources: Spanish Authorities and IMF staff calculation.

Note: Cash Availability Ratio = (Cash and Cash Equivalents) / (Short-Term Liabilities or Current Liabilities). Debt ratio is defined as the sum of current and non-current liabilities to total assets.

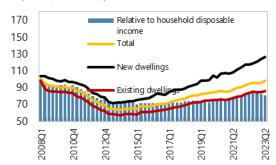
In accordance with the criteria of the European Commission Recommendation 2003/361/EC, the category of micro, small and medium-sized enterprises (SMEs) is made up of enterprises which employ fewer than 250 persons and have an annual turnover not exceeding EUR 50 million Firms with over 250 employees and turnover of more than EUR 50 million are considered large.

Figure 6. Spain: Residential Real Estate

House price growth remains positive on a year-onyear basis, especially for new dwellings, ...

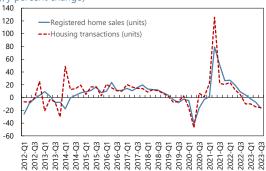
House Price, 2008-2023

(Index, 2007=100)



Housing Transaction Volumes

(y/y percent change)



... while housing transactions have declined sharply.

Housing supply has been weak, ...

Number of Housing Construction Started

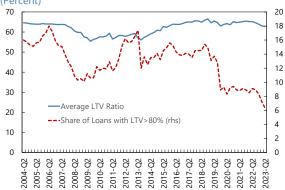
(y/y percent change)



... and lending standards remain prudent.

Spain: Mortgage Loan-to-value (LTV) Ratios

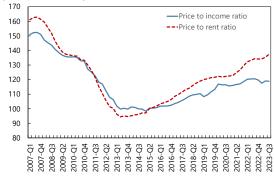
(Percent)



Price-to-income ratio has remained stable and rising price-to-rent ratio is mostly driven by moderate rent growth.

Price-to-income and Price-to-rent Ratios

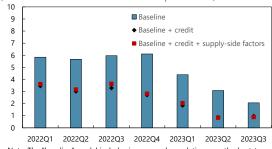
(Index, 2015 = 100)



House prices are assessed to be broadly in line with fundamentals.

House Price Misalignment Estimates

(Percent deviation from fundamental price levels)



Note: The "baseline" model includes income and population growth, short-term and long-term interest rates, stock prices, price-to-income ratios, and crisis dummies as explanatory variables

Sources: Registradores de España, INE, Ministero de Fomento, OECD, BIS, BdE, Eurostat, and IMF staff. LTV calculated at origination.

Figure 7. Spain: Commercial Real Estate

CRE developments are heterogenous across segments, but prices remain generally below pre-pandemic levels. Spain did not experience a boom in the CRE market last year as seen in some other advanced economies.

Spain: Comercial Real Estate Prices

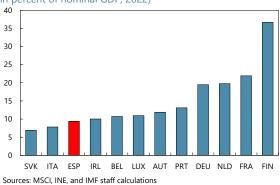
(Index, non-seasonally adjusted, 2014 = 100)



The CRE market is relatively small in Spain, ...

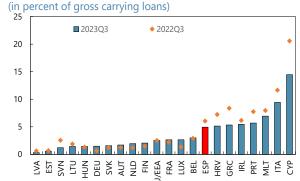
CRE Market Size in Selected Euro Area Economies

(in percent of nominal GDP, 2022)



NPL ratios in the CRE portfolio remain relatively high, related to legacies from the previous crisis, ...

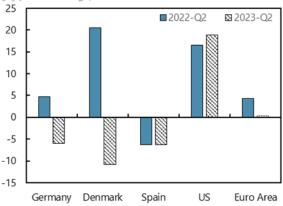
NPL Ratios in the RE and Construction Loan Portfolio



Sources: EBA and IMF staff calculations. Note: CRE loans include loans to the real estate and the construction sector.

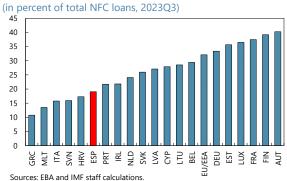
CRE Price Growth in Selected Economies

(y/y percent change)



... and it also takes a smaller share of total NFC loans than in most other advanced economies.

Real Estate and Construction Loans

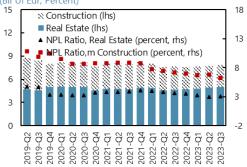


Note: CRE loans include loans to the real estate and the construction sector

...although the ratios have been on a steady decline since 2021.

Distribution and NPL Ratio of NFC Loans and Advances by NACE Code

(Bil of Eur, Percent)



Sources: EBA; Haver Analytics; and IMF staff calculations.

Figure 8. Spain: Financial Sector's Exposure to Sovereign Debt

The public debt to GDP ratio is still high despite a slight reduction since 2021.

Debt and Finance Balance (Percent of GDP) 14 0 Gross debt (% GDP) 120 100 80 -6 60 40 -10 20 -12 0 -14 Sovereign CDS premia have declined and stabilized at moderate levels over the past decade.

While pension funds and insurance firms have reduced their exposure to sovereign debt, they remain the most exposed in their portfolios. Exposures of banks and open-ended funds to sovereign debt has increased in recent years.

Jan-14

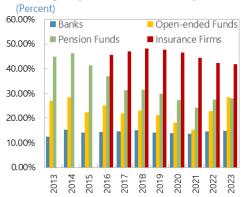
Jan-17

Jan-20

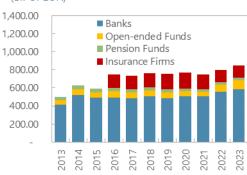
Jan-08

Jan-11

Sovereign Exposure to Total Asset, by Sector



Total Gross Sovereign Exposure Volumes(Bil of EUR)



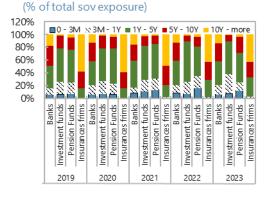
Banks and insurers have home biases in sovereign debt holdings, in contrast to funds.

Funds have a preference for medium-term maturity bonds, while insurers hold long-term bonds.

Home Bias in Sovereign Exposure



Total Gross Carrying Amount by Maturity



Sources: Bank of Spain, CNMV, ECB SHSS, and IMF staff calculations.

Figure 9. Spain: Banks' Sovereign Exposures

Spanish banks are among the most exposed to sovereign risk in Europe.

MFIs Domestic Sovereign Exposures, 2023Q3 140 14 12 ■ % of assets 120 ■ % of capital (rhs) 10 100 8 80 60 6 40 2 20 ESP BEL

Spanish banks have increased their exposures to sovereign bonds held at amortized costs...

Sovereign Bonds Held at Amortized Cost

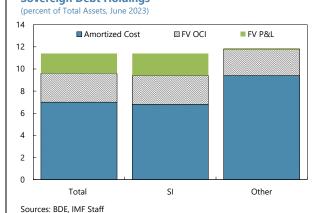


Sources: EBA; Haver Analytics; and IMF staff calculations.

... which now account for 60 percent of total Sovereign bonds

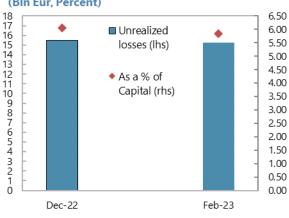
ereign ... but unrealized losses only account for a small portion of bank capital

Sovereign Debt Holdings



Sources: Bank of Spain, ECB SDW, and IMF staff calculations.

ESP Unrealized Losses (Bln Eur. Percent)



Sources: EBA; Haver Analytics; and IMF staff calculations.

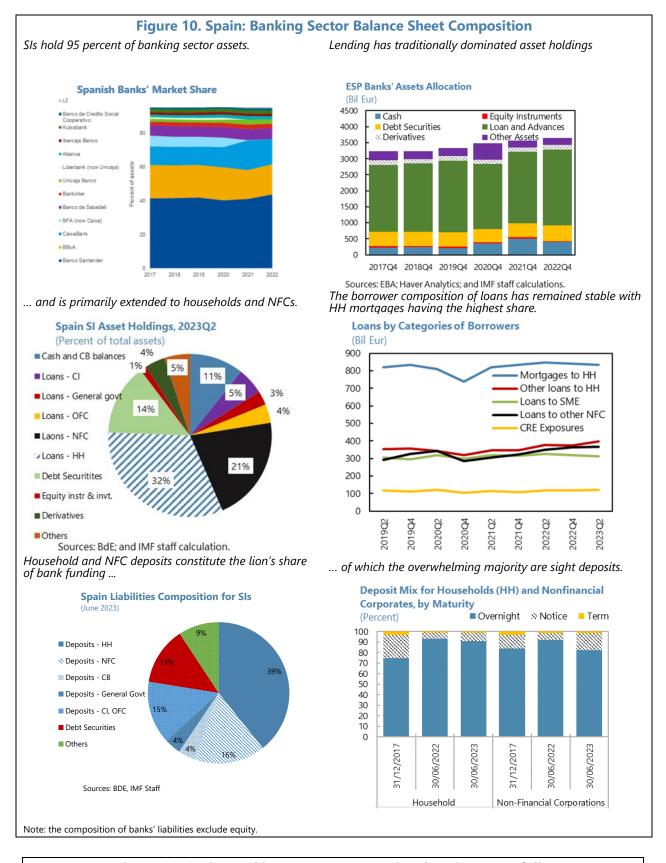
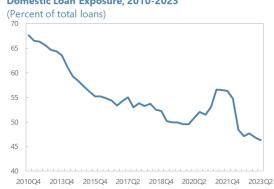


Figure 11. Spain: Banking Sector's International Business Portfolio

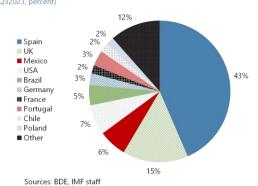
Spanish banks have increased their presence abroad...

Domestic Loan Exposure, 2010-2023



...with more than half of their lending to foreign counterparties.

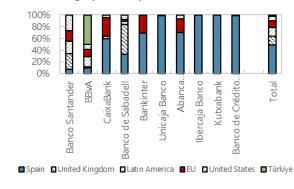
Geographical Dist. of Spanish Credit to the Private Sector



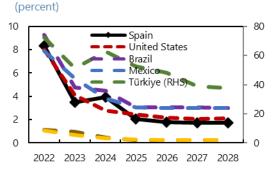
The largest three banks take the bulk of this foreign risk exposure...

... in countries where current IMF projections are for stable, real GDP growth ...

Bank's Geographical Exposures, 2022Q2

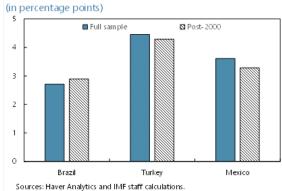


IMF-WEO Inflation Projection



but with growth and inflation being historically volatile in some of these countries over the past 25 years.

Historical Standard Deviations - Real GDP Growth



Historical Standard Deviations - Headline Inflation (in percentage points)

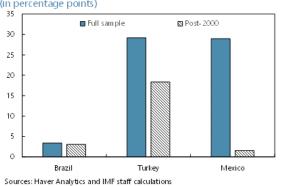
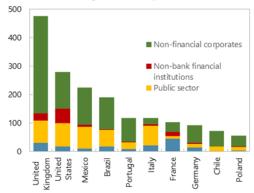


Figure 12. Spain: Cross-Border Banking Activities

Spanish banks exhibit concentrated foreign claims in the United Kingdom, the United States, Brazil, and Mexico (2023Q2).

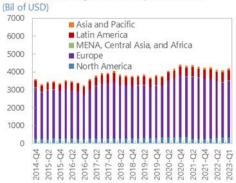
Foreign banks' exposure to Spain is significantly smaller, totaling approximately US\$ 450 billion (2023Q2).

Consolidated Foreign Claims of Spainish Banks



The international claims of Spanish banks have witnessed a steady increase post euro-crisis.

Consolidated Foreign Claims of Spainish Banks



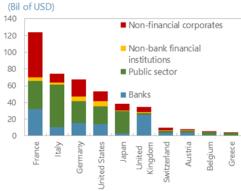
Spanish banks' foreign claims primarily take the form of loans by their foreign subsidiaries.

Cross Border vs Local Claims-Consolidated Foreign Claims



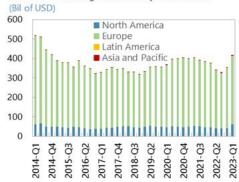
Sources: BIS Consolidated and Locational Banking Statistics, and IMF staff calculations.

Consolidated Foreign Claims on Spain



In contrast, the consolidated foreign claims on Spain have seen a notable decline since the GFC.

Consolidated Foreign Claims of Spainish Banks



The degree of intragroup transfer within Spanish banks seems relatively limited when compared to their international counterparts.

Cross-Border Intra-Group Claims

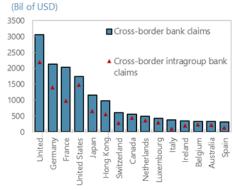


Table 4. Spain: Selected Financial Soundness Indicators

(Percent change unless otherwise indicated)

	2017	2018	2019	2020	2021	2022	2023 /4
Depository institutions							
Capital adequacy: Consolidated basis							
Regulatory capital to risk-weighted assets	15.5	15.6	15.9	17.0	17.4	16.7	17.0
Regulatory tier-1 capital to risk-weighted assets	13.4	13.7	14.0	14.9	15.2	14.6	14.8
Tier 1 Capital to total assets	6.1	6.0	6.1	5.9	5.8	5.5	5.6
Asset quality: Consolidated basis							
Nonperforming loans (in billions of euro)	113	95	84	74	88	80	82
Nonperforming loans to total loans	4.5	3.7	3.2	2.9	2.9	3.1	3.0
Specific provisions to nonperforming loans	65.4	60.0	54.4	54.3	55.7	34.7	35.1
Asset quality: Domestic operations							
Nonperforming loans (in billions of euro)	94.2	67.2	54.3	52.2	49.4	40.3	39.1
Nonperforming loans to total loans	7.9	5.8	4.8	4.4	4.2	3.5	3.4
Exposure to businesses - Construction (in billions of euro)	141.7	120.2	111.5	107.6	107.2	98.9	96.0
o/w: Nonperforming (in percent)	19.6	10.2	6.7	6.0	5.1	4.9	4.6
Exposure to businesses - Other (in billions of euro)	428.5	403.8	400.6	446.4	443.2	443.3	429.1
o/w: Nonperforming (in percent)	7.4	6.1	5.2	4.8	4.7	4.1	4
Exposure to households - Home purchase (in billions of euro)	492.6	490.5	483.5	477.9	483.3	483.3	474.4
o/w: Nonperforming (in percent)	4.5	3.9	3.2	2.9	2.7	2.1	2.2
Exposure to households - Other (in billions of euro)	121.3	122.9	129.0	131.5	129.8	130.1	130.1
o/w: Nonperforming (in percent)	8.8	8.5	7.7	7.5	7.1	5.0	5.0
Earning and profitability: Consolidated basis							
Return on assets	0.7	0.9	0.7	0.0	0.9	0.9	1.1
Return on equity	6.7	8.1	6.7	-3.2	10.1	9.8	11.8
Funding							
Loans to deposits 1/	88.6	89.8	80.1	76.7	74.7	73.9	74.8
Other financial institutions							
Total assets (in percent of GDP)							
Insurance companies and pension funds	38.2	37.5	37.4	41.4	39.3	32.8	
Other institutions 2/	47.0	42.0	43.6	49.3	47.0	40.3	
Shadow banking activity 3/	24.2	22.5	24.6	23.9			
Corporate sector							
Debt (in percent of GDP)	78.0	74.2	72.1	85.3	80.1	71.2	
Debt to total assets	94.0	86.2	82.3	84.1	79.0	75.3	
Liquid assets to short-term liabilities	219.2	225.4	239.3	337.8	362.0	305.4	
Household sector							
Debt (in percent of GDP)	61.1	58.9	56.8	62.6	57.6	52.3	48.4
Debt service and principal payment to disposable income	41.8	41.6	40.9	42.0	39.9		
Real estate market	41.0	71.0	70.5	72.0	33.3		
House price (percentage change, end-period)	7.2	6.6	3.6	1.5	6.4	5.5	3.6
Housing completion (2007=100)	8.5	10.0	12.3	13.4	14.2	13.9	5.0
Property sales (2007=100)	57.4	63.1	62.7	52.5	70.3	76.4	

Sources: Bank of Spain; Haver analytics; FSB, Global Shadow Banking Monitoring Report 2017; IMF, Financial Soundness Indicators database and World Economic Outlook database; and IMF

^{1/} Based on loans to and deposits from other resident sectors.

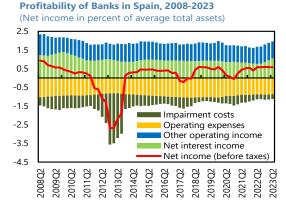
^{2/} Include public financial institutions, other financial intermediaries and financial auxiliaries.

^{3/} Based on FSB's economic-based shadow banking measure.

^{4/} Data for funding, corporate sector, household sector and real estate market as of 2023Q2

Figure 13. Spain: Banking Sector Profitability

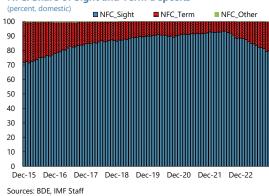
Profitability has rebounded and reached its prepandemic level...



Sources: Bank of Spain; and IMF Staff calcualtion.

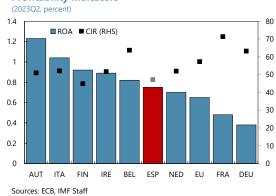
The surge in interest rates quickly initiated a migration of NFC deposits from sight to term deposits...

NFC: Share of Sight and Term Deposits



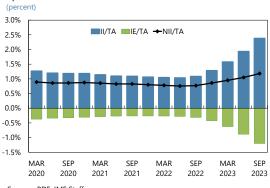
Spanish SIs', on average, outperform peers on profitability and cost efficiency bases.

Profitability Indicators



...with a recent increase in the net interest income.

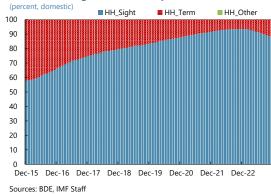
Spain Net Interest Income



Sources: BDE, IMF Staff

... and by January 2023, also a similar migration for household deposits.

HH: Share of Sight and Term Deposits



Their return on equity has been on a steady rise postpandemic.

Return on Equity, 2015-2023

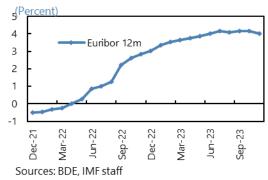


Figure 14. Spain: Pass-Through of Recent Interest Rate Surge

higher...

Interest rates have increased significantly since end-2021.

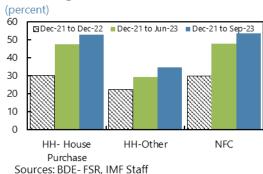
Interest Rate



...but has now caught up for new term deposits.

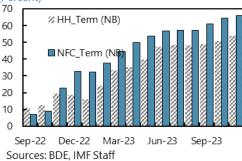
Pass-Through of increase in Euribor to Loan Rates (percent)

Average passthrough on lending has been quicker and

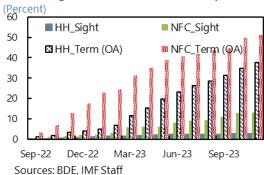


...but is lagging for outstanding term and especially sight deposits.¹

Term (New Business) Deposit Pass-Through (Percent)



Pass-Through of Increase in Euribor on Deposit Rates

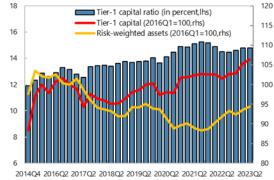


¹Pass-through is calculated as the ratio of change in deposit beta for the concerned category of deposit to the maximum variation in Euribor 12-month relative to the concerned time period. OA refers to outstanding amounts and NB to new business.

Figure 15. Spain: Capitalization of Banking SIs

Capital ratios have improved since 2017 resulting primarily from a reduction in RWAs, and more modestly, from increased capital levels.

Risk-Weighted and Tier-1 Capital



... but their leverage ratios are comparable to most EA peer countries, and ...

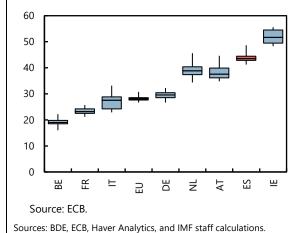
Leverage Ratio: Fully Phased In Definition, 2023Q2



Sources: ECB; Haver Analytics; and IMF staff calculations.

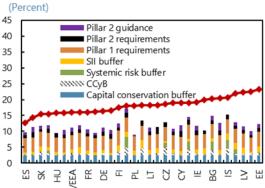
Banks in Spain have higher risk weight density for both retail...

Risk Weights Distribution for SIs - Retail



Spanish banks' regulatory capital ratios remain lower than European peers primarily reflecting lower voluntary buffers...

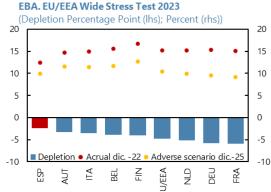
CET 1 Requirements Including Pillar 2 Guidance



Sources: EBA Supervisory Reporting Data.

...their capital depletion in the latest EBA stress tests was lower than EA peers.

CET 1 Ratio



Sources:: EBA; and IMF staff calculations.

...and corporate sector exposures.

Risk Weights Distribution for SIs - Institutions

(2015Q2-2023Q3, percent, IRB approach)

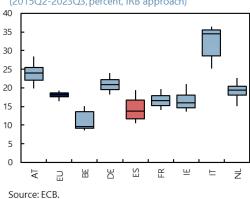


Figure 16. Spain: Banking Sector Asset Quality

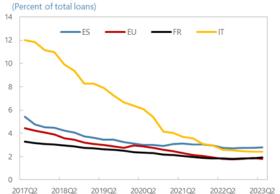
NPL ratios have decreased in Spain since the end of the GFC with the decline in last five years being 3pp...

Spain - Nonperforming Loans



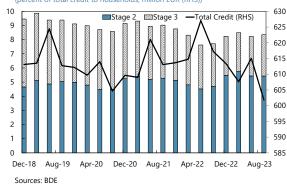
...and in line with the decline across other European peers.

Nonperforming Loans, 2017-2023

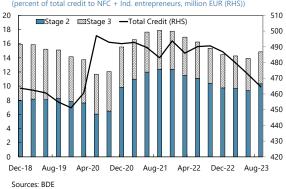


The share of stage 2 loans – a leading indicator for future NPLs saw a recent uptick for households and for NFCs.

Households- Loans in Stage 2 and Stage 3 (percent of total credit to households, million EUR (RHS)) Stage 3

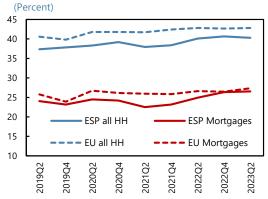


NFC + IND. Entrepreneurs - Loans in Stage 2 and Stage 3 (percent of total credit to NFC + Ind. entrepreneurs, million EUR (RHS)) 20



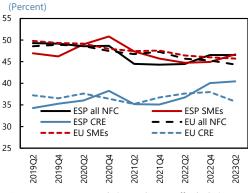
NPL provisioning coverage grew in the 12 months prior to June 2023 and have largely caught up with EU peers.

Coverage Ratios for HH



Sources: EBA; Haver Analytics; and IMF staff calculations.

Coverage Ratio for NFC

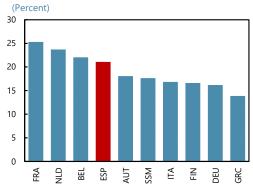


Sources: EBA; Haver Analytics; and IMF staff calculations.

Figure 17. Spain: Focus on LSI Banking Sector Capitalization, Profitability, and Liquidity

Spanish LSIs are well capitalized, with regulatory capital ratios higher than most European peers...

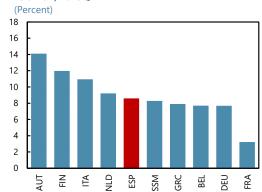
LSIs CET1 Ratio, 2023Q2



Sources: ECB; and IMF staff calculation.

Spanish LSIs are well positioned compared with peers in terms of profitability...

LSIs ROE, 2023Q2

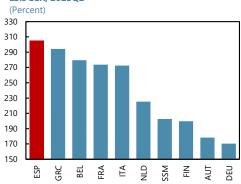


Sources: ECB; and IMF staff calculation.

Sources: ECB; and IMF staff calculation

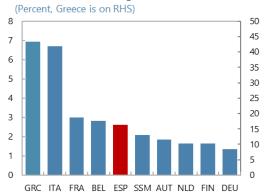
Spanish LSIs have a strong liquidity profile over a 30-day horizon, as measured by the LCR...

LSIs LCR, 2023Q2



... while nonperforming loans remain relatively low in aggregate, moderately above the SSM average.

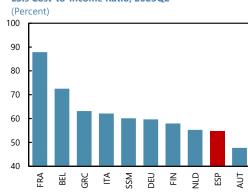
LSIs NPL Ratio Excluding Cash Balances, 2023Q2



Sources: ECB; and IMF staff calculation

... and operational efficiency.

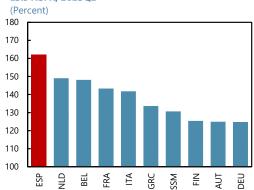
LSIs Cost-to-Income Ratio, 2023Q2



Sources: ECB; and IMF staff calculation.

... as well as over a one-year time horizon, as measured by the NSFR.

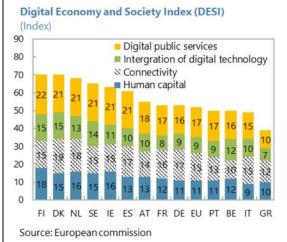
LSIs NSFR, 2023Q2



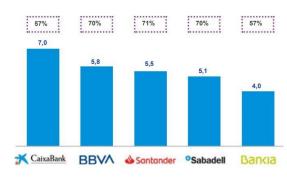
Sources: ECB; and IMF staff calculation.

Figure 18. Spain: Digitalization of the Financial Sector

Spain stands above the EU area in the DESI ranking



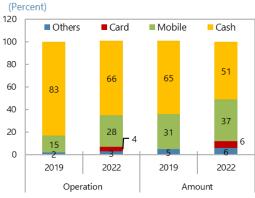
Digital banking is showing widespread use...



Percentage of digital customers out of the total customer base in Spain

The use of cash is declining, both for payments in physical commerce...

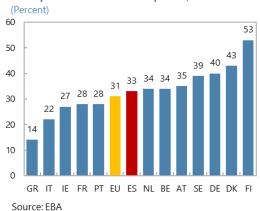
Payments in Physical Commerce (POS)



Source: BdE.

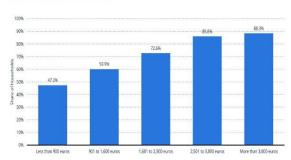
...Spanish banks ICT expenses over total administrative expenses are comparable to most EA peers

ICT Expenses over Administ Expenses, Jun 2023



... notably among households with higher net income

re of online banking users by household net income in Spain 2022



... and between individuals, notably to new payment methods offered by banks

Payments between Individuals (P2P)

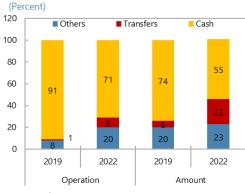
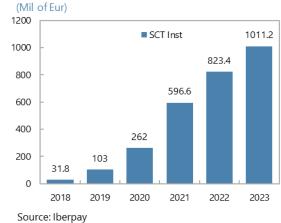


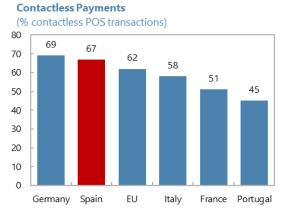
Figure 18. Spain: Digitalization of the Financial Sector (concluded)

The use of SEPA instant credit transfer (SCT Inst) has grown very rapidly...

... while the proportion of contactless payments is higher than the EU average

Yearly Evolution of SCT-Inst in Spain



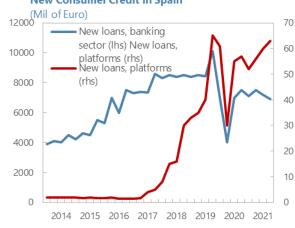


Source: ECB, 2022.

(Bil of Euro)

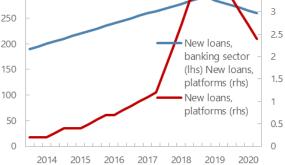
New consumer credit granted by crowdfunding platforms recorded very strong growth both in Spain and Europe, albeit from a very low volume base.

New Consumer Credit in Spain



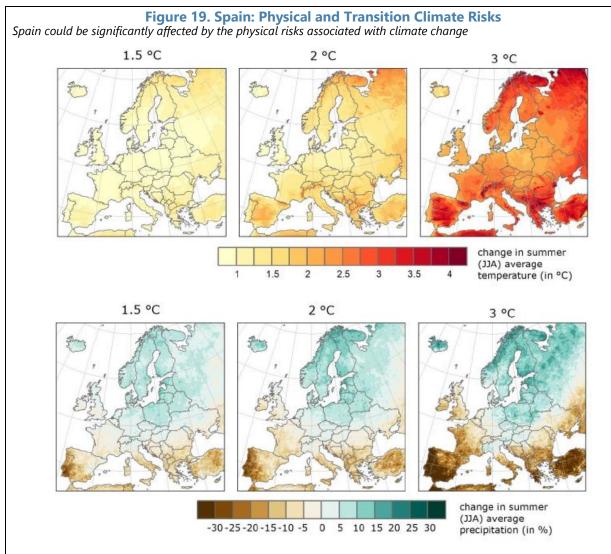


New Consumer Credit in Europe



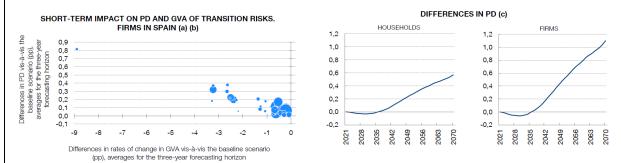
Sources: BdE publications, KPMG report, Chainalysis, and Statista.

3.5

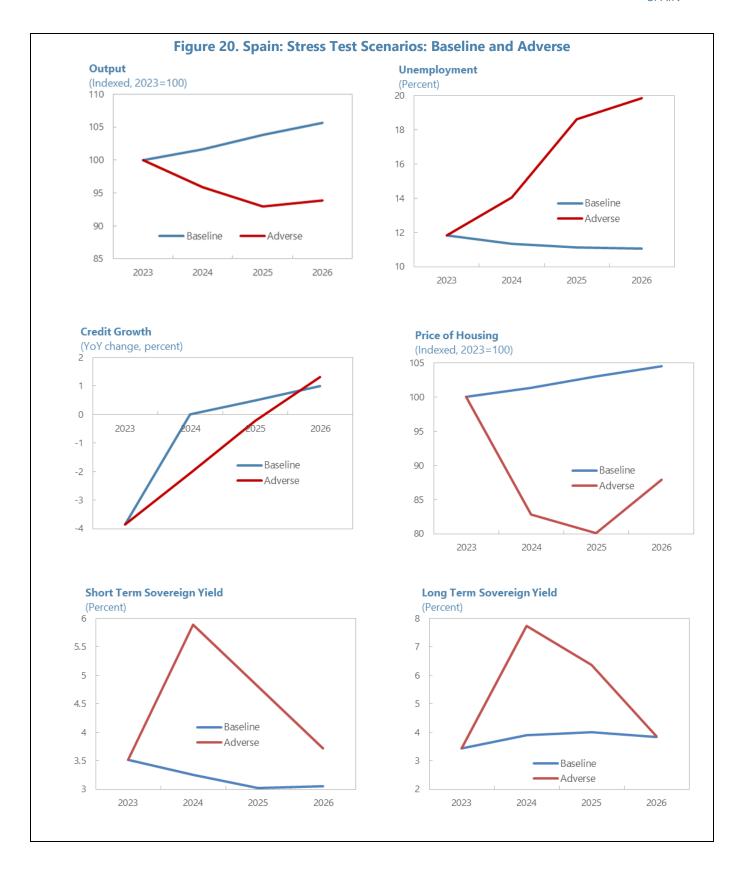


Source: JRC PESETA IV report, 2020. Changes from reference period (1981-2010) in summer temperature (top panels) and precipitation (bottom) for the three global warming scenarios used in PESETA IV (1.5°C, 2°C and 3°C warmer than pre-industrial times).

The long-term deterioration in the quality of loans resulting from physical risks is expected to be greater than that due to transition risks



Source: BdE Annual Report, Chapter 4 on the Spanish Economy and the Climate Challenge, 2021. The right-hand chart depicts, for each portfolio (households and firms) and each year, the difference in expected PD under two different scenarios: one in which physical risks materialize forcefully (hot house scenario) and another which envisages an orderly transition towards a sustainable energy model.



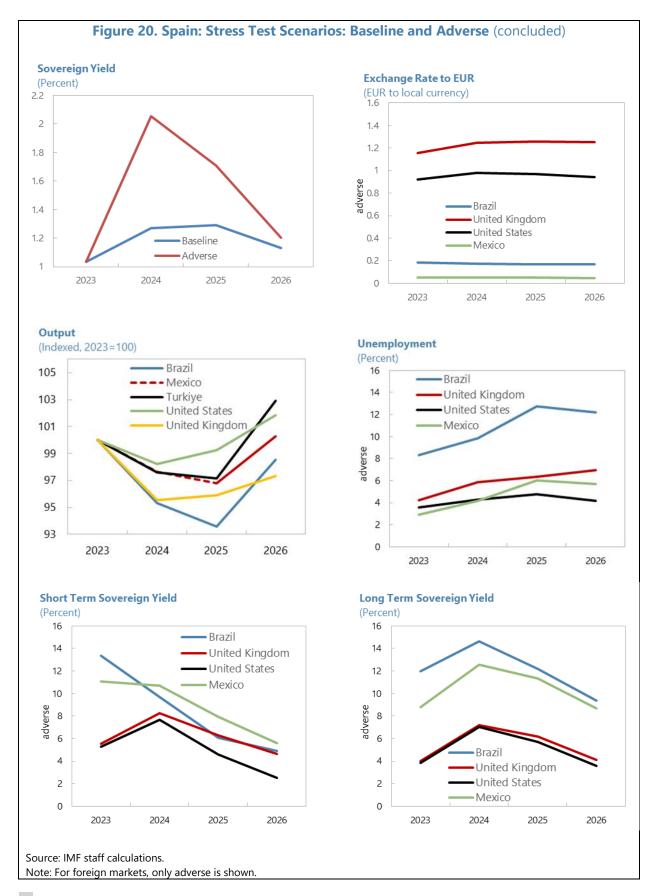


Table 5. Spain: Adverse Macro Scenario (Percent change unless otherwise indicated)

	2024	2025	2026
Spain			
Real GDP growth	-4.09	-3.10	1.00
Core Inflation	6.77	2.46	0.86
Unemployment	14.03	18.61	19.84
Short term sovereign yield	5.89	4.80	3.71
Long term sovereign yield	7.73	6.35	3.85
Sovereign spread over Germany	2.06	1.71	1.20
House Price	-17.16	-3.29	9.70
Credit Growth	-2.06	-0.22	1.32
Brazil			
Exchange rate to EUR	0.17	0.17	0.17
Real GDP growth	-4.68	-1.83	5.29
Core Inflation	5.67	4.55	4.07
Long term sovereign yield	14.65	12.21	9.39
Short term sovereign yield	9.69	6.08	4.89
Unemployment	9.86	12.72	12.22
Mexico			
Exchange rate to EUR	0.05	0.05	0.05
Real GDP growth	-2.37	-0.86	3.62
Core Inflation	5.32	5.40	4.82
Long term sovereign yield	12,58	11,33	8.68
Short term sovereign yield	10.72	7.96	5.62
Unemployment	4.16	6.01	5.69
Other Euro area	4.10	0.01	5.03
Real GDP growth	-2.74	0.20	1.43
Core Inflation	6.20	3.47	1.74
Long term sovereign yield	6,69	5.61	3.38
Short term sovereign yield	5.99	4.71	3.32
Unemployment	6.19	7.07	7.34
Türkiye	0.15	7.07	7.54
Exchange rate to EUR	0.03	0.02	0.01
Real GDP growth	-2.42	-0.46	5.94
Core Inflation	63.88	54.43	49.60
Long term sovereign yield	46.74	47.00	45.30
Short term sovereign yield	43.26	43.48	43.63
Unemployment	43.26 11.52	43.46 14.15	13.89
United Kingdom	11.52	14,13	15.89
Exchange rate to EUR	1.25	1.26	1 25
exchange rate to EOR Real GDP growth		0.35	1.25 1.50
Core Inflation	-4.45 5.01		
	5.81	4.87	2.40
Long term sovereign yield	7.22	6.16	4.12
Short term sovereign yield	8.23	6.29	4.62
Jnemployment	5.87	6.38	6.96
United States	2.22	0.07	
Exchange rate to EUR	0.98	0.97	0.94
Real GDP growth	-1.77	1.04	2.59
Core Inflation	4.96	4.67	2.80
Long term sovereign yield	7.02	5.71	3.59
Short term sovereign yield	7.66	4.60	2.50
Unemployment	4.28	4.77	4.16

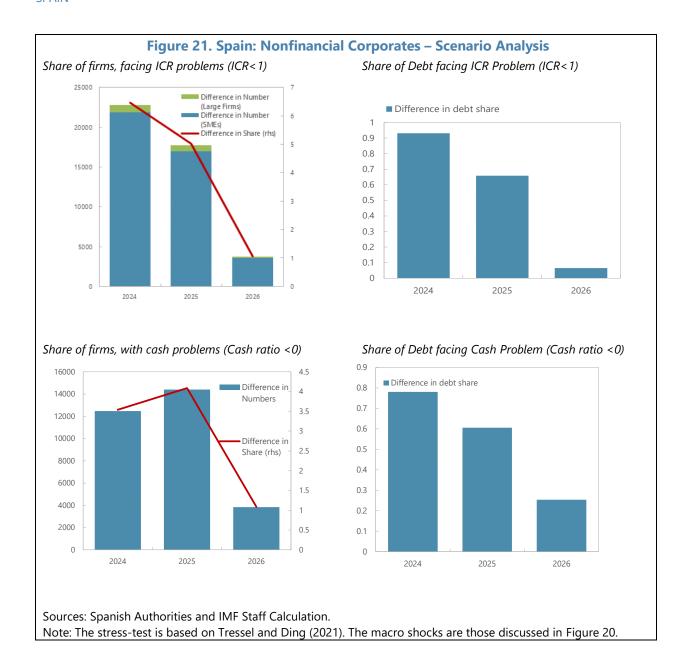
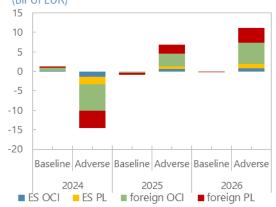


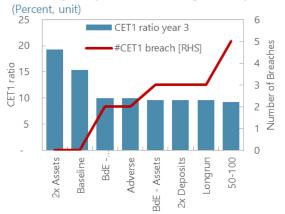


Figure 22. Spain: Solvency Stress Test Results (concluded)

Market Risk Losses, by Accounting Treatment (Bil of EUR)

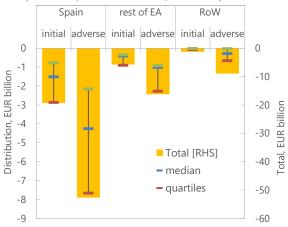


Sensitivity Analysis to Pass-Thorugh Assumptions



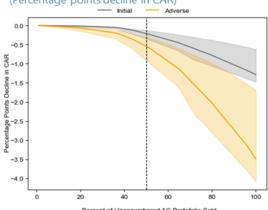
Unrealized Losses on Amortised Cost Securities

(Bil of EUR, adverse scenario; 2024-end)



Losses with Pecking Order

(Percentage points decline in CAR)



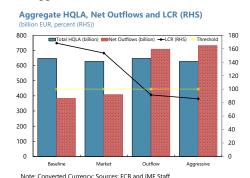
Sources: BdE, ECB, and IMF Staff calculations.

Note. Alternative pass-through were obtained in different ways: (1) doubling the pass-through on loans and deposits separately ("2x-Deposit" and "2x-Assets"); (2) BdE estimates of pass-through on loans and deposits as of June 2023 ("BdE- Assets", "BdE- deposits"); (3) long-run estimates of pass-through using an ARDL model.

Estimates of unrealized losses are an upper bound for two reasons: (1) the data available to the FSAP on sovereign exposures does not distinguish between loans and bonds (on aggregate, loans constitute between 10 and 67 percent of the carrying amount in a given maturity bracket); (2) by prioritizing the sale of the bonds with lower maturity, hence lowering unrealized losses, the banks could liquidate half of their portfolio with less than one quarter of the estimated total losses.

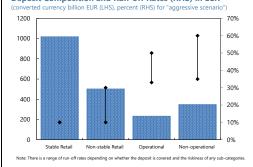
Figure 23. Spain: LCR Analysis for 10 SI

The LCR falls below the hurdle rate under the "outflow" and "aggressive" stress scenarios.



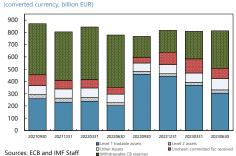
The key drivers of the "outflow" scenario are deposits with varying run-off rates across different types.

Deposit Composition and Run-off Rates (RHS) in LCR



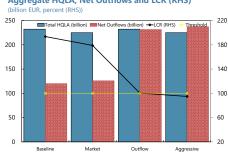
The total amount of CBC across 10 SIs has been quite stable and of and high quality while its composition has slightly evolved over time.

Aggregate Composition of CBC stock over time



Currency-specific LCR capturing exposures in EUR would perform better under all stress scenarios for the three largest banks

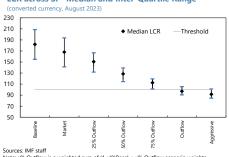
Aggregate HQLA, Net Outflows and LCR (RHS)



Note: EUR only for 3 international banks: Sources: ECB and IMF Staff

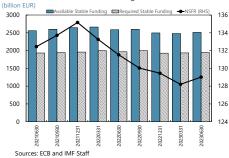
If 75 percent of the run-off rates considered under the outflow" scenario were to materialize, SIs in aggregate would still exceed the hurdle rate.

LCR across SI - Median and Inter-Quartile Range



The aggregate NSFR for the 10 SIs has been well above the hurdle rate for the last two years.

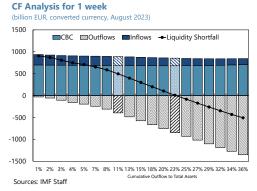
Time Series of Net Stable Funding Ratio across SI



Note: The Basel LCR relies on standardized stress assumptions, which are reflected in prescribed inflow and outflow rates and haircuts to highly liquid assets. The severity of the shocks underlying these assumptions can be further increased under different scenarios. The two intermediate scenarios isolating the effects from only "market stress" affecting the market value of liquid assets and "funding stress" with higher outflow rates are used to decompose the underlying drivers of financial risk for banks' liquidity. Sensitivity analysis is also performed for a range of "funding stress" scenarios with increasing run-off rates on outflows.

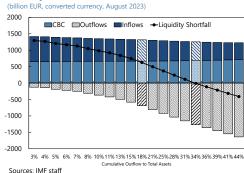
Figure 24. Spain: Cash-Flow Analysis for 10 SIs

SIs maintain a marginal liquidity surplus under the aggressive scenario over a 1-week horizon...



...while having a marginal shortfall under the aggressive scenario persisting for 3 months.

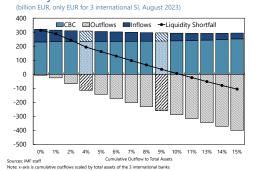
CF Analysis for 3 months



For EUR exposures, the largest banks maintain higher

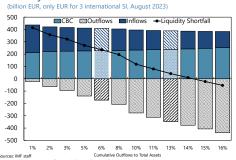
liquidity buffers over a one-week horizon...

CF Analysis for 1 week



As well as over a three-month period.

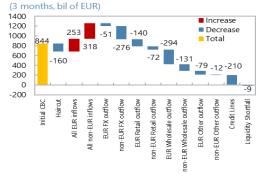
CF Analysis for 3 months



The depletion of counterbalancing capacity is primarily

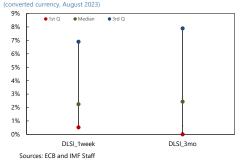
due to outflows on wholesale deposits and credit lines.





The DLSI measures the additional stress that would deem a bank from liquidity surplus to shortfall.

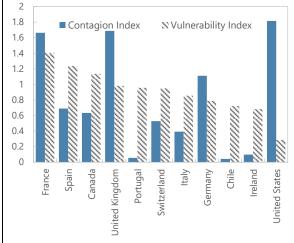
Distribution of DLSI across SI for 1 week and 3 months



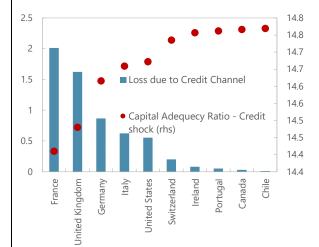
Note: The CF analysis considers a range of stress scenarios (more than 20) affecting runoff rates and rollover rates of maturing obligations (i.e., the stress factors) with increasing severity. The scenarios are scaled using a simple linear grid of weighted sums between the assumptions underlying the Basel LCR in terms of run-off rates and the "aggressive" scenario. The x-axis summarizes the scenario severity in terms of aggregate outflows to total assets in each scenario, with the Basel and Aggressive scenarios highlighted in the grid.

Figure 25. Spain: Cross-Border Contagion Analysis Results

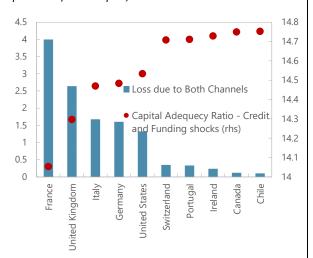
Contagion and Vulnerability indices (in percent of total capital



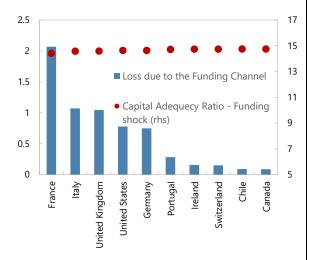
Capital loss due to the credit channel (in percent of total capita)



Capital loss due to credit and funding channels (in percent of total capita)



Capital loss due to the funding channel (in percent of total capita)



Sources: BIS, FSI, and IMF staff calculations.

Note: Index of contagion (or index of outward spillover risks): the average loss of other banks due to the failure of a bank i. The index is computed as $Cont_i = 100 * \frac{1}{N-1} \sum_{j=1,j\neq i}^{N} \frac{L_{ji}}{K_j}$, where K_j is the capital of bank j and L_{ji} is the loss to bank j due to the default of bank i. The outward spillover reflects the percentage of capital loss in other countries due the failure of banking system in Spain.

Index of vulnerability (or index of inward spillover risks): the average loss of a bank i due to the failure of all other banks. The index is computed as $Vuln_i = 100 * \frac{1}{N-1} \sum_{j=1,j \neq i}^{N} \frac{L_{ij}}{K_i'}$ where K_i is the capital of bank i and L_{ij} is the loss to bank i due to the default of bank j. The inward spillover reflects the percentage of capital loss of Spanish banks due to shocks from the banks in corresponding countries.

Figure 26. Spain: Domestic Contagion and Interbank Analysis

Limited impact within the domestic interbank system overall. The horizontal line in the boxplot represents the median of contagion indices for 18 banks.

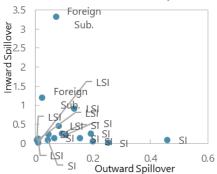
Contagion Index

30 % Collateralized 50 % Collateralized

0.5
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05

Outward spillovers are due to SIs. LSIs and foreign subsidiaries are more vulnerable to inward spillovers.

Matrix of Inward vs Outward spliovers



The exposure between different financial sectors are limited and banks are at the center.

Cross-Sector Network Exposure Map

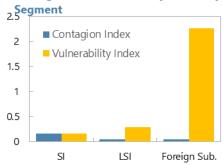


... whereas a few banks might be more vulnerable to the inward spillovers from other defaulting banks. The horizontal line in the boxplot represents the median of vulnerability indices.

Vulnerability Index 30 % Collateralized 50 % Collateralized 3.5 3 2.5 2 1.5 1 0.5

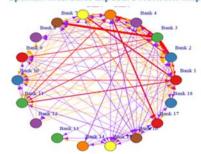
The aggregated index by segment also shows vulnerability in some segments.

Contagion and Vulnerability Indices by



The network map of interbank exposure shows the role of a few banks in propagating the shocks through direct exposure.

Spanish Interbank Exposure Network Map



Note: Other NBFI includes securities-dealer companies, securitization financial vehicle corporations, venture capital companies, listed real-estate investment companies, bank asset funds, central counterparties and asset management companies, Specialized Credit Institutions, financial auxiliaries and captive financial institutions and money lenders.

Sources: BIS Consolidated and Locational Banking Statistics, and IMF staff calculations.

Table 6. Spain: Status of 2017 Spain FSAP Key Recommendations				
(Based on the 2023 Update by the Authorities)				
Recommendations	2023 Status Update by the Authorities			
To address crisis legacy issues and mitiga	te other risks to financial stability			
1. Enforce implementation of the ECB guidance on NPLs, including promoting banks' disclosure of targets and progress (P19)				

Table	6. Spain: Status of 2017 Spain FSAP Key Recommendations (continued)
Recommendations	2023 Status Update by the Authorities
2. Improve recovery of viable businesses by enabling the stay and involvement of public creditors in all pre-insolvency processes and enhancing the OCAP process for SMEs; strengthen commercial courts by resourcing them better (P21)	As a result of the transposition of the Insolvency EU Directive, the reform of the Insolvency Law, as set forth in Law 16/2022, entered into force on September 26, 2022. The reform derogates the two pre-insolvency procedures (out-of-court agreements (for SMEs) and refinancing agreements) and introduces two new procedures: a special procedure for microenterprises and restructuring plans for companies that are not microenterprises. • Both procedures introduce several improvements, among them: they can be used at an earlier stage of difficulties (when there is a mere likelihood of insolvency), they allow for a cross-class cram-down, they can affect public credit (only through deferrals in the case of restructuring plans) and they can impose a stay on public credit enforcement actions. • The special procedure for microenterprises is simplified and its cost is reduced as much as possible. For instance: an insolvency practitioner will only be required in certain specific cases and otherwise the liquidation of assets will be implemented through an electronic platform. • Restructuring plans have been designed in a very flexible way with the minimum procedural regulation. The second chance procedure has also been enhanced: • It reduces the period for the effective exoneration of debtors from five to three years. • It allows for exoneration without a previous liquidation of the production assets of the self-employed or the main residence of the debtor, which will incentivize the use of the procedure. • It increases the array of credits that can be exonerated. Public credit can be exonerated up to a maximum of EUR 20,000.
3. Evaluate the scope for further banking consolidation through mergers, branch reduction, and business model adjustments (P22)	Profitability and the sustainability of banking business models have been a priority for the ECB and Banco de España over the last few years, in a context marked by weak profitability in a low interest rate environment. Branch reduction has continued in this period. In addition, some additional consolidation processes have been undertaken. Some specific examples are: • The merger by absorption of Bankia by CaixaBank took place in March 2021, and the technological integration was successfully completed in November of the same year. The main shareholders CriteriaCaixa (40 percent of Caixabank) and FROB (62 percent of Bankia) continue to be the main shareholders of the merged entity, with 30 percent and 17.6 percent, respectively. The resulting entity has become the domestic leader in assets, loans and deposits, with market shares of over 25 percent. The operation envisaged significant restructuring (-10 percent FTEs and -28 percent number of branches). After the restructuring, the resulting entity maintains a balanced geographical distribution in Spain, with a limited international presence. The synergies obtained are having a positive impact on profitability and efficiency. The cost synergies, estimated at EUR 900 million per year, are 80 percent achieved. In

Table 6. S	pain: Status of 2017 Spain FSAP Key Recommendations (continued)
Recommendations	2023 Status Update by the Authorities
Recommendations	addition, additional revenue synergies of around EUR300 million per year are expected to be materialized in the coming years. • In the case of Unicaja Banco, the merger with Liberbank was completed on July 30, 2021. The economic rationale of the transaction is based on improving efficiency through the reduction in the branch network and headcount (namely 26 percent and 29 percent until 2024, reached in June 2022 the 72 percent and 31 percent of this target) and the generation of economies of scale in key projects as of digitalization. The business model remains unchanged (retail bank mainly focused on mortgages and SMEs in the Spanish market) but its bigger size can generate new business opportunities. • An additional example is Abanca, which has adopted an active inorganic growth policy over the last years. In 2019 it acquired the business of Deutsche Bank in Portugal and Banco Caixa Geral in Spain, while Bankoa and Novo Banco Spain were integrated in 2021. As for LSIs, important consolidation processes have taken place in the cooperative sector, with the creation in March 2018 of an IPS, which groups 30 credit cooperatives and a bank (Banco Cooperativo Español). Subsequently, some additional cooperatives have joined this or other IPSs (only 4 cooperatives remain independent). From a general perspective, the ECB published the guide on supervisory approach to consolidation at the beginning of 2021. The ECB will make use of its supervisory tools to facilitate sustainable consolidation projects. Such projects
	must be based on a credible business and integration plan, improve the sustainability of the business
4 Manitar rigorously interest rate and hand	model, and respect high standards of governance and risk management. IRRBB is subject to regular monitoring, quarterly and in the annual SREP. There are also specific activities
4. Monitor rigorously interest rate and bond market risks; ensure appropriate capital requirements to mitigate such risks (P 23)	focusing on this risk. Over the last years, in a context of negative interest rates and narrow margins, several onsite inspections (OSIs) have been performed at Spanish significant institutions. Spanish significant institutions have also been included in horizontal exercises of targeted reviews/analyses conducted by the ECB.
	Further, a regular monitoring of the sovereign portfolio market risks is performed, taking into account the recent changes in the monetary policy. Specifically, potential impacts on banks' capital ratios of scenarios based on the credit spread volatilities experienced during the last sovereign debt crisis are calculated and analyzed. With respect to less significant institutions, a regular monitoring is performed, and the prudential approach is reflected in the ICAAP/ILAAP Guideline, where a rule for capital allocation is defined.

Table 6. Sp	pain: Status of 2017 Spain FSAP Key Recommendations (continued)
Recommendations	2023 Status Update by the Authorities
by closing reporting gaps; critically review funding structures and policies of banks with excessive reliance on ECB's liquidity support; overall, place a premium on	For the Spanish Significant Institutions (SI), there is an individualized assessment of the liquidity and funding risk, based on an ongoing monitoring in the context of the SREP methodology. This individualized monitoring, in general standardized, is tailored in scope and intensity under specific circumstances. The individual assessment is supplemented with horizontal analysis of short/long-term key indicators. In addition to the monitoring of the LCR (including stress test simulations) and NSFR metrics, in the current environment, supervisors are assessing the institutions' capacity to address an immediate cancelation of the TLTRO, and how this event could impact on their LCR under different scenarios. Taking into account this input, JSTs perform an individual analysis on the specific funding plans and actions foreseen by the banks. In 2019, all the Spanish Significant Institutions participated in the Liquidity Stress Test (LiST) exercise conducted by the ECB, which increased notably the knowledge on the institutions strengthens and weaknesses. Furthermore, the LiST allowed comparisons across business models and to assess more accurately the liquidity risk of the Spanish SIs. The results of this exercise were taken into account in the SREP.
	With regard to the Less Significant Institutions, the monitoring is based on a trigger system based on key risk indicators. In the regulatory field, at the EU level, a new financial statement for banks, "maturity ladder", was introduced in March 2018, though this information was already collected by BdE.
6. Initiate, supervisory and prudential steps to reduce the mismatching of assets/liabilities in insurer balance sheets (P 24)	The DGSFP carries out an ongoing monitoring of both durations and returns on assets and liabilities in the insurers' balance sheets. This monitoring is performed through offsite analysis based on quantitative reporting templates and onsite activities.
7. Foster development of market-based financing and supply of nonbank financial services for corporates and households (P25)	Fostering market-based finance has been a priority over the last years as a source of funding for economic recovery. In this context, the CNMV has developed different measures. One of the most important initiatives has been promoting the use of two alternative stock and fixed income exchanges –BME Growth and MARF respectively- for small-cap firms, venture capital financing and the development of crowdfunding platforms. Finally, the CNMV encourages and participates in informative sessions set up by secondary markets. In addition, a contact point has been established for firms that intend to go public.

Table 6. S	pain: Status of 2017 Spain FSAP Key Recommendations (continued)
Recommendations	2023 Status Update by the Authorities
	The Spanish financial authorities also try to boost financial innovation through new digital technologies and their possible applications to financial markets. In this context they analyze the viability of new business models or the use of new technologies by the Innovation Hub and the Spanish regulatory sandbox. Lastly, the implementation of the European framework for simple, transparent and standardized securitization has established tools to foster the market-based financing to further provide credit to households and corporates.
8 . Enhance capacity to monitor and analyze macro financial linkages, intra-system connectedness, and cross-border spillovers;	analysis of interconnectedness of the banking sector within the financial system and with non-financial sectors.
close data gaps (P31)	The CNMV analyses regularly direct connectedness between banks and other financial institutions (OFI) in its annual NBFI Report. In addition, in 2020, a working paper focused on connectedness and systemic risk in the field of non-alternative Collective Investment Schemes -CIS- was published.
	For the DGSFP, macro financial interlinkages analysis is performed regarding not only interconnections in relation to investments, but also in relation to business models. The Spanish Macroprudential Authority (AMCESFI, created in March 2019) has set up a Subcommittee on
	Interconnectedness (participated by staff from all member authorities). It evaluates intra-system connections from multiple angles: direct exposures, indirect interconnections and common portfolio exposures. This assessment is regularly published in AMCESFI's Annual Reports, covering both direct and indirect channels of interconnectedness between financial institutions.
9 . Review, as a priority, SAREB's mediumterm financial outlook based on adverse	In December 2020, SAREB became part of the Public Administrations sector, in a change promoted by Eurostat and, since then, SAREB's debt is computed as State debt.
scenarios; set up a tripartite committee (BdE, MoE, and FROB) to work out any needed mid-course corrections (\$\mathbb{P}\$57)	'
	SAREB is not expected to have additional financing needs in the medium term. Even though SAREB has negative equity since December 2021, it has a comfortable liquidity position and it has no obligation to repay its debt, except for the cash portion generated. This will be the situation until its statutory duration expires, at the end of 2027, when the State must assume the payment of the pending debt as its guarantor.

Table 6. Spain: Status of 2017 Spain FSAP Key Recommendations (continued)			
Recommendations	2023 Status Update by the Authorities		
To strengthen systemic and prudential over	ersight		
10 . Set up a 'Systemic Risk Council' for interagency coordination on systemic risk factors, surveillance, and system-wide financial sector policies (P33)	Royal Decree 102/2019 created AMCESFI (Autoridad Macroprudencial Consejo de Estabilidad Financiera) in March 2019, the national macroprudential authority. The mandate of AMCESFI includes the identification and surveillance of systemic risk factors as well as the coordination of sectoral macroprudential policies. The functions of AMCESFI are discharged by its Council and its Financial Stability Technical Committee (comprising high-ranking officials from MoE, BdE, CNMV and DGSyFP).		
11. Expand the macroprudential toolkit to include borrower-based tools (P39)	Following the enactment of Royal Decree-law 18/2018, of December 14, 2021, on macroprudential tools, the BdE issued the Circular 5/2021, on December 22, 2021, developing a set of macroprudential tools for the banking sector (which complements the toolkit available in EU legislation) including: (i) Limits and conditions on lending (borrower-based instruments); (ii) limits to the sectoral concentration of credit and (iii) sectoral countercyclical capital buffer. The European Commission, under the remit of article 513 of Regulation (EU) 575/2013 started work on a comprehensive review to assess whether the macroprudential rules are sufficient to mitigate systemic risks. The assessment mainly focused on four areas: flexibility in the use of CCyB, widening of the macroprudential space by designing new tools/mechanisms, calibration of O-SIIs and inclusion of harmonized borrower-based measures. No legislative proposal is foreseen in the short term. Instead, it is expected that the Commission will issue a report to co-legislators informing them of the main conclusions of the assessment and a potential way forward. In addition, some amendments regarding flexibility in the use of the CCyB and streamlining macroprudential articles in CRR may be included through targeted changes in the CRR/CRD ongoing legislative process of implementing Basel III standards.		
12. Increase supervisory focus on corporate governance practices across all credit institutions, and the nonbank sector (P46,51,52)	Internal Governance and risk management have been included as supervisory priorities for the ECB during		

Table 6. Spain: Status of 2017 Spain FSAP Key Recommendations (continued) Recommendations 2023 Status Update by the Authorities		
Reconfinentiations		
	The assessment of the governance and the risk control and risk management is developed in the annual	
	SREP. In this regard, a continuous revision of the minutes of the board and the delegated committees is	
	performed, and the JSTs have developed communication frameworks with the entities, through different	
	channels at several levels (executive directors, chairs of delegated committees, rest of directors, and	
	senior management), where specific topics are addressed at a given frequency.	
	In terms of risk control, the lines of defense have been reinforced with an enhanced degree of	
	independency within the entities and a greater involvement with the board, together with improved technical and human resources.	
	In the context of the ongoing supervision, requirements and/or recommendations are sent to the entity	
	when weaknesses are identified to fully comply with the best governance practices established by the SSM regulation, the EBA guidelines, and the BCBS principles.	
	The Fit and Proper process in place has been reinforced through the implementation of transparent and	
	harmonized selection criteria. The procedure includes a comprehensive analysis of all candidates, with	
	in-depth interviews for directors.	
	The CNMV continues focusing its supervisory activities on the quality of the audit committees, its	
	oversight role of financial reporting and internal control systems and the compliance of the required	
	criteria of independent board directors.	
	For insurance, since 2018 to 2022, the DGSFP has set as one of its supervisory priorities, the supervision	
	of the implementation and efficiency of corporate governance practices in insurance companies and	
	groups. This supervision has focused on the review of the following elements:	
	• Key functions policies, including reporting lines and the role of the internal control and internal audit.	
	• Involvement of the AMSB on the decision, orientation and monitoring of the main drivers of the	
	business activity.	
	 Analysis of the outsourcing of functions, in particular IT and in relation to cyber-risks. 	
	AMSB members selection.	
	Remuneration policies.	
3. Assign the BdE full regulatory pov	vers No specific action has been taken. That said, the draft European Commission CRD Directive VI (April	
n matters not harmonized at the Europ		
evel including authorizing mergers ([*4	· ·	
	merger or divisions. If the proposal is approved, authorization powers for mergers (no opposition) would	
	be given to the supervisor, and therefore the FSAP recommendation would be superseded. The final	
	proposal is not expected before end-2023.	

Table 6. Spain: Status of 2017 Spain FSAP Key Recommendations (concluded)				
Recommendations	2023 Status Update by the Authorities			
To bolster crisis management, resolution, and safety nets				
14. Develop a credible resolution strategy for credit cooperatives and other LSIs; prepare recovery and resolution plans for significant insurance companies (63–64) Sos and 6 full obligations). In relation to entities with a resolution strategy in case of fa account their specificities, the default preferred resolution tool is the sale-of-business. Moreover, the BdE conducts an annual risk assessment system (as part of the annual that changes in the risk profile can be identified in order to keep recovery plans updat Regarding the cooperative sector, in 2018, a platform to mutualize losses among severa and a bank (Banco Cooperative Sepañol) was created to facilitate any future resolution. cooperatives and a bank are the members of such platform. In addition, there are pending legislative initiatives to facilitate the resolution of the sanamely: An amendment safeguarding compliance with the principle of NCWO in resolution. Bank of Spain proposal (not formalized) to amend Cooperatives legal framewo Cooperative Español to set up a central body accountable for solvency, liqui requirements. For insurance, a national regulation on recovery planning is currently being prepare				
15 .Strengthen and upgrade the deposit guarantee scheme; create a protection scheme for insurance policyholders (P 66)	level, a new Directive on recovery and resolution for the insurance sector is being discussed. At the European level, in June 2022, the Eurogroup invited the Commission to table legislative proposals regarding the crisis management and deposit insurance (CMDI) framework. It is expected that the Commission will seek to promote the use of DGS funds to facilitate the resolution for small/medium sized banks with a large deposit base. No specific action is expected in the coming future regarding the creation of a common European deposit insurance (EDIS). In the insurance sector, the guarantee scheme for victims of road traffic accidents is being strengthened.			

	Table 7. Spain: Stress Test Matrix				
		Banking Se	ctor: Solvency Stress Test		
		To	p-down by IMF		
1.	Institutional	Institutions included	Ten SI banks, of which one G-SIB		
	Perimeter	Market share	Almost 95 percent of the banking sector assets		
		Data and baseline date	 Multiple data vintages: 2023 Q3 (starting point for PL (annualized), balance sheet and capital), time series 2015 Q1-2023 Q3 (net fee and commission income) Supervisory data: Bank balance sheet and supervisory statistics (including FINREP and COREP), information on interest rate risk in the banking book (IRRBB), provided by the authorities and the ECB. Expected Default Frequency sourced from Moody's. Further supervisory information on probability of defaults by credit portfolios for domestic exposures. Market and confidential data on banks on funding and lending rates by type of asset and funding portfolios. Scope of consolidation: banking activities of the consolidated banking group for banks having their headquarters in Spain. Coverage of sovereign and non-sovereign securities exposures: debt securities measured through fair value (FVPL and FVOCI) and amortized cost (AC) account. 		
2.	Channels of Risk Propagation	Methodology Satellite models for macro-financial linkages	 FSAP team satellite models and methodologies. Balance-sheet regulatory approach. Provisioning for IRB and SA are modeled using IFRS9 transition matrix approach. Traded risk impact from the revaluation of trading assets (FVPL) and securities classified as fair value thorough other comprehensive income (FVOCI) securities assessed using a modified duration approach. Structural model of bank NII, based on repricing ladder and estimated betas. Models for credit losses (PD and LGD by portfolio), funding costs, lending rates, net fee and commission income and risk weights For internally modelled exposures (IRB), projection of PiT and TTC PDs, LGD, EAD, and RWA. For SA exposures, projection of new flows of defaulted exposures. Provisioning for IRB and SA modeled using IFRS9 transition matrix approach. Funding costs to be projected at the portfolio level using funding structure by product (retail and wholesale deposits, secured and unsecured debt securities, repo, etc.) and maturity bucket 		

	Table 7. Spain: Stress Test Matrix (continued)				
	Banking Sector: Solvency Stress Test				
			op-down by IMF		
3.	Institutional	Institutions included	Ten SI banks, of which one G-SIB		
	Perimeter	Market share	Almost 95 percent of the banking sector assets		
		Data and baseline date	 Multiple data vintages: 2023 Q3 (starting point for PL (annualized), balance sheet and capital), time series 2015 Q1-2023 Q3 (net fee and commission income) Supervisory data: Bank balance sheet and supervisory statistics (including FINREP and COREP), information on interest rate risk in the banking book (IRRBB), provided by the authorities and the ECB. Expected Default Frequency sourced from Moody's. Further supervisory information on probability of defaults by credit portfolios for domestic exposures. Market and confidential data on banks on funding and lending rates by type of asset and funding portfolios. Scope of consolidation: banking activities of the consolidated banking group for banks having their headquarters in Spain. Coverage of sovereign and non-sovereign securities exposures: debt securities measured through fair value (FVPL and FVOCI) and amortized cost (AC) account. 		
4.	Channels of Risk Propagation	Satellite models for macro-financial linkages	 FSAP team satellite models and methodologies. Balance-sheet regulatory approach. Provisioning for IRB and SA are modeled using IFRS9 transition matrix approach. Traded risk impact from the revaluation of trading assets (FVPL) and securities classified as fair value thorough other comprehensive income (FVOCI) securities assessed using a modified duration approach. Structural model of bank NII, based on repricing ladder and estimated betas. Models for credit losses (PD and LGD by portfolio), funding costs, lending rates, net fee and commission income and risk weights For internally modelled exposures (IRB), projection of PiT and TTC PDs, LGD, EAD, and RWA. For SA exposures, projection of new flows of defaulted exposures. Provisioning for IRB and SA modeled using IFRS9 transition matrix approach. Funding costs to be projected at the portfolio level using funding structure by product (retail and wholesale deposits, secured and unsecured debt securities, repo, etc.) and maturity bucket (overnight vs. term). 		

		Table 7	7. Spain: Stress Test Matrix (continued)
			Banking Sector: Solvency Stress Test
			Top-down by IMF
5. Tail Sho	ocks	Stress test horizon	• 2023 Q3– 2026 Q4 (three years, one quarter)
		Scenario	 Two Scenarios: A baseline scenario drawn from the October 2023 WEO macroeconomic projections. An adverse scenario that captures the key risks in the RAM. This scenario relies on GFM, a structural macro-econometric model of the world economy, disaggregated into forty national economies, documented in Vitek (2018).
		Sensitivity analysis	 Estimation of unrealized losses of held-to-maturity securities as interest rates rise, separating domestic and foreign sovereign securities. Banks not fulfilling LCR requirement in the outflow scenario of LCR test will be considered separately, to identify potential liquidity – solvency spillover. Estimation of NII impact of a range of deposit Beta. Alternative paths for Spain sovereign spreads will be considered.
6. Risks Buffers	Risks and Buffers	Risk covered	 Risks covered include credit (on loans and debt securities), market (valuation impact of debt instruments through repricing and credit spread risk as well as the P&L impact of net open positions in market risk factors such as foreign exchange risks) and interest rate risk on the banking book (IRRBB).
		Behavioral Adjustment	 For the growth of the banks' balance sheet over the stress-test horizon, whereas the balance sheet grows in line with the nominal GDP paths, floored at 0, except for domestic loans exposures where, as shown in Figure 16, credit growth in Spain is negative for 2024 and 2025. In projecting RWAs, standardized and IRB portfolios are differentiated. For the standardized portfolios, RWAs changed due to the balance sheet growth, new inflows of nonperforming loans, new provisions for credit losses, exchange rate movements, and the conversion of a portion of off-balance sheet items (undisbursed credit lines and guarantees) to on-balance sheet items. For the IRB portfolios, through-the-cycle-PDs, downturn LGDs and EAD for each asset class/industry are used to project risk weights. Interest income from nonperforming loan is not accrued. Dividends are paid out by banks that remain adequately capitalized throughout the stress.

		Table	e 7. Spain: Stress Test Matrix (continued)
			Banking Sector: Solvency Stress Test
			Top-down by IMF
7. 8.	Regulatory and Market- Based Standards and Parameters Reporting Form for Results	Output presentation	 National regulatory framework Basel III regulatory minima on CET1 (4.5 percent) plus any requirements due to Pillar 2; and capital buffers (capital conservation buffer and systemic buffer for other systemically important institution (O-SII)). Leverage ratio during the stress test horizon against the 3 percent Basel III minimum requirement. System-wide capital shortfall Number of banks and percentage of banking assets in the system that fall below regulatory minima. Outputs also include information on impact of different result drivers, including profit components.
9.	Institutional	Institutions included	Ten banks, of which one G-SIB
	Perimeter	Market share Data and baseline date	 Total coverage is about 95 percent of the banking sector Latest data: August 2023 Source: supervisory data (including FINREP and COREP) Scope of consolidation: banking activities of the consolidated banking group for banks having their headquarters in Spain.
		Methodology	 Structural Liquidity Analysis: Basel III LCR (30-day horizon), NSFR (one year horizon) and cash-flow based liquidity stress test using maturity buckets (one week and three-month horizon) by banks, incorporating both contractual and behavioral (where available) assumption about combined interaction of funding and market liquidity and different level of central bank support. The LCR (outflow and aggressive) scenarios are calibrated based on relevant historical episodes (including the Cataluña events of 2017 and the resolution of Banco Popular in 2017), Liquidity test in EUR, USD, GBP, MXN, BRL, TRY, CLP.
10.	Channels of Risk Propagation	Risks	Funding liquidityMarket liquidity
11.	Risks and Buffers	Buffers	 The counterbalancing capacity, including liquidity obtained from markets and/or the central bank's facilities. Expected cash inflows are also included in the cash-flow based and LCR-based analysis.
12.	Tail shocks	Size of the shock	 The run-off rates are calibrated to reflect scenarios of system-wide deposit runs and dry-up of unsecured wholesale and retail funding, with additional run-off for non-resident deposits on top of the retail and wholesale run-off, which is calibrated following historical events, recent international experience in liquidity crisis and IMF expert judgment.
			 The haircuts of high-quality liquid assets (HQLA) are calibrated against ECB haircuts, past EA FSAPs, and market shock for investment securities and money market instruments in the solvency stress test.

Top-down by IMF egulatory standards Consistent with Basel III regulatory framework (LCR). Liquidity shortfall by bank. Liquidity ratio or shortfall by groups of banks and systemwide. Number of banks that still can meet or fail their obligations. Distribution of the distance to liquidity stress indicator for banks	
Consistent with Basel III regulatory framework (LCR). Liquidity shortfall by bank. Liquidity ratio or shortfall by groups of banks and systemwide. Number of banks that still can meet or fail their obligations. Distribution of the distance to liquidity stress indicator for banks	
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Number of banks that still can meet or fail their obligations.Distribution of the distance to liquidity stress indicator for banks	
and systemwide.	
Interconnectedness and Contagion Analysis ¹	
and Interbank Analysis	
10 SIs, 6 LSIs and two foreign subsidiaries	
Contagion analysis of hypothetical individual bank failures through credit or funding shocks. Data as of 2023Q2 is derived from the domestic bilateral interbank exposure network at the group level, sourced from the Spanish credit registry maintained by the BdE. The initial credit shock impacts one bank, leading to its failure to meet debt obligations to its creditors. This results in the creditor banks using their capital reserves to cover these unforeseen losses. If their capital is inadequate, they too face default. A funding shock is represented by a bank's collapse and its consequential effect on debtor banks, which then must seek alternative funding. These institutions use their capital to manage losses caused by funding shortfalls. If their capital is insufficient, they also face default.	
 The analysis produces contagion index showing the aggregate capital impairment in the domestic banking system due to a hypothetical failure of one bank, and vulnerability index showing the capital impairment for each impacted bank due to hypothetical failures of other banks. 	
ion and Interbank Analysis	
11 banking centers that maintain the largest direct banking exposures with Spain.	
Analysis is used to assess the extent to which the failure of a banking system in one country could spread across borders. BIS Locational Banking Statistics are used. It included a credit shock and a funding shock following the methodology outlined in Espinosa-Vega and Solé (2010). The first simulation considered the credit shock only, and the second simulation examined the effects of a joint credit plus a funding shock.	
Results showed inward and outward spillovers to and from Spain.	
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