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FRANCE

FINANCIAL SECTOR ASSESSMENT PROGRAM

August 2025

TECHNICAL NOTE ON MACROPRUDENTIAL POLICY FRAMEWORK AND TOOLS

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TECHNICAL NOTE

MACROPRUDENTIAL POLICY FRAMEWORK AND TOOLS

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This Note was prepared by IMF staff in the context of an IMF Financial Sector Assessment Program (FSAP) in France. The FSAP was led by Mr. Charles Cohen. The note contains technical analysis and detailed information underpinning the FSAP's findings and recommendations. Further information on the FSAP can be found at http://www.imf.org/external/np/fsap/fssa.aspx

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Glossary

ACPR	French Prudential Supervision and Resolution Authority (*Autorité de contrôle prudentiel et de résolution)*
AIF	Alternative Investment Fund
AIFM	Alternative Investment Fund Manager
AIFMD	Alternative Investment Fund Manager Directive
AMF	French Financial Markets Authority (Autorité des marchés financiers)
ANC	French Accounting Standards Authority (Autorité des Normes Comptables)
ATC	Advisory Technical Committee
AWG	Analysis Working Group
BBMs	Borrower-Based Measures
BCBS	Basel Committee on Banking Supervision
BdF	Banque de France
BIS	Bank for International Settlements
Bps	Basis points
CCyB	Countercyclical Capital Buffer
CET1	Common Equity Tier 1
CGFS	Committee on the Global Financial System
CMF	French Monetary and Financial Law (Code Monétaire et Financier)
CRE	Commercial Real Estate
CRD	Capital Requirement Directive
CRR	Capital Requirement Regulation
CSDB	Centralized Securities Database
DG Trésor	French Treasury (Direction Générale du Trésor)
DSF	Financial Stability Department of the BdF
DSGE	Dynamic Stochastic General Equilibrium
DSTI	Debt-Service-to-Income
EA	Euro Area
EBA	European Banking Authority
EBITDA	Earnings before interest, tax, depreciation and amortization
EEA	European Economic Area
EC	European Commission
ECB	European Central Bank
EGBPI	Expert Group on Banking, Payments and Insurance
EIOPA	European Insurance and Occupational Pensions Authority
EMIR	European Markets Infrastructure Regulation
ESFS	European System of Financial Supervision
ESMA	European Securities and Markets Authority
ESRB	European Systemic Risk Board
EU	European Union
FAQs	Frequently Asked Questions
FMI	Financial Market Infrastructure

FPC	Financial Policy Committee (of the Bank of England)
FSAP	Financial System Stability Assessment
FSB	Financial Stability Board
FSC	Financial Stability Committee
FSEG	Financial Stability Engagement Group
FSOC	Financial Stability Oversight Council (of the United States)
FSR	Financial Stability Review
G20	Group of Twenty
GDP	Gross Domestic Product
GPR	Groupe de place Robustesse
G-SIB	Global Systemically Important Bank
G-SII	Global Systemically Important Institution
HCFS	Household Consumer Finance Survey
HCSF	High Council for Financial Stability (Haut conseil de stabilité financière)
HQLA	High Quality Liquid Assets
IAIS	International Association of Insurance Supervisors
ICR	Interest Coverage Ratio
IMF	International Monetary Fund
IOSCO	International Organization of Securities Commissions
ISIN	International Securities Identification Number
IWG	Instruments Working Group
LCR	Liquidity Coverage Ratio
LE	Large Exposure
LGD	Loss Given Default
LMT	Liquidity Management Tool
LSIs	Less Significant Institutions
LTV	Loan-to-Value ratio
MiFiD	Markets in Financial Instruments Directive
MFI	Monetary and Financial Institutions
MMF	Money Market Fund
MoEF	Ministry for the Economy and Finance
MPAG	Macroprudential Analytical Group
MPF	Macroprudential Forum
MPPG	Macroprudential Policy Group
NBFI	Non-Bank Financial Institution
NFC	Nonfinancial Corporation
NSFR	Net Stable Funding Ratio
OECD	Organization for Economic Co-Operation and Development
OPC	French term for Collective Investment Undertakings (Organismes de Placements Collectifs)
O-SII	Other Systemically Important Institution
P2G	Pillar 2 Guidance
P2R	Pillar 2 Regulation

PD	Probability of Default
PnCCyB	Positive neutral Countercyclical Capital Buffer
RRE	Residential Real Estate
RWA	Risk-Weighted Assets
SCIs	Sociétés Civiles Immobilières, a type of special purpose vehicle
SFTDS	Securities Financing Transactions Data Store
SHS	Securities Holdings Statistics
SI	Significant Institution
SIBs	Supervision of the Systemically Important Banks
SSR	Short Selling Regulation
sSyRB	Sectoral Systemic Risk Buffer
SVAR	Structural Vector Auto-Regression
SyRB	Systemic Risk Buffer
SSM	Single Supervisory Mechanism
TN	Technical Note
UCITS	Undertaking for Collective Investment in Transferable Securities
UK	United Kingdom
US	United States

EXECUTIVE SUMMARY

Macroprudential institutional arrangements remain largely unchanged since the last FSAP, with several features aligning with best practices for effective macroprudential policy. The Haut conseil de stabilité financière (HCSF) is the designated authority with hard powers over specific tools and soft powers for recommendations. Chaired by the Minister of Economy and Finance, it provides a strong role for the Governor of the Banque the France (BdF), enabling willingness to act. Membership includes key agencies (which have their own financial stability mandates, consistent with best practices, and can rely on the deep expertise of their staff) and external members, facilitating coordination and mitigating inaction bias. The market authority is an active participant in the HCSF, unlike in many jurisdictions. National authorities have adequate powers for information gathering and strong accountability frameworks. The European Central Bank (ECB) has top-up powers over hard tools and the European Systemic Risk Board (ESRB) can issue warnings and recommendations.

Authorities took and maintained several strong actions to mitigate risks to financial stability and further enhance macroprudential oversight since the last FSAP. In 2019, to mitigate rising household indebtedness and deteriorating lending standards, the authorities introduced borrower-based measures through debt-service to income ratio and loan maturity limits and maintained them through the recent period of rising interest rates. The measures are now widely considered part of the landscape. The authorities proactively rebuilt the counter-cyclical capital buffer (CCyB) (called the credit protection reserve) after the COVID-19 crisis and introduced a sectoral systemic risk buffer (sSyRB) on exposures to highly indebted corporates (until June 2025). French non-bank financial institution (NBFI) regulation has been ahead of the curve, and since the 2019 FSAP, authorities have broadened the scope of key indicators used by HCSF beyond banks to cover a broad spectrum of vulnerabilities and risks and are conducting a system-wide liquidity stress test.[1]

While the HCSF is well-functioning and effective overall, its framework should be strengthened by adopting stronger rules on HCSF governance, transparency, and public accountability, and by clarifying its semi-hard and soft powers. In 2024, a year which saw the dissolution of the National Assembly, three of the four HCSF meetings took place as written procedures. HCSF governance should be enhanced by adopting limits on the number of meetings that can be held as written procedures and provisions that allow meetings to be convened by a majority vote of members rather than only by the Chair. To improve transparency, all recommendations, opinions, and voting outcomes should be published by default, with exceptions voted on by members. Public accountability should be strengthened by publishing voting records and mandating testimonies before Parliament about HCSF work at least once a year. While HCSF can issue public recommendations to its member institutions, its powers can be further enhanced by adding an explicit 'comply or explain' mechanism to its toolkit and explicit powers to make

[1] See Annex Table 1 for further details on the progress on the 2019 FSAP recommendations.

recommendations to the MoEF (for example, as with the Bank of England's Financial Policy Committee or FPC).

Communication of macroprudential policy can be further improved through periodic strategy reviews and adopting best practices in financial stability communications. Regular strategy reviews (similar to the one announced in June 2025) would help adapt the financial stability framework and improve public communications. Communication could be bolstered through scheduled press conferences by the Minister and Governor, public consultations, publishing key indicators guiding HCSF decisions on its webpage, a strengthened HCSF annual report, and layering of communications to the public.

Surveillance and systemic risk assessment rely on comprehensive information, and have been enhanced since the 2019 FSAP, but further improvements are desirable. Authorities utilize comprehensive data and state of the art tools for analysis and are developing system-wide liquidity stress tests, which should become regular exercises going forward. Surveillance of housing market risks can be enhanced through data on lending to special purpose vehicles and loan level data matched to borrower and property characteristics.

Borrower-based measures (BBMs) on housing loans should be broadened to prevent leakages and reflect best practices. Existing BBMs have improved lending standards, and, along with structural features of the lending market, have kept the losses low. To prevent leakages, BBMs should, where possible, be broadened to renovation and other consumer loans. The flexibility margin could be narrowed or some prudential requirements introduced to cover loans within it, along with expanded monitoring of loans to Sociétés Civiles Immobilières (SCI), a form of special purpose vehicle. From a macroprudential perspective, it is preferable to broaden BBMs before the boom phase of the housing cycle. High loan to value (LTV) loans are common in France and warrant further monitoring. As current BBMs do not include an LTV limit, authorities should continue to monitor market dynamics and consider customized LTV measures should they assess them to be appropriate.

The availability of releasable capital buffers should be formalized by improving guidance regarding the neutral level of the credit protection reserve. Authorities have proactively rebuilt releasable capital buffers through the credit protection reserve post-COVID, aligning with the positive neutral CCyB (pnCCyB) approach of early buildup of the buffer. However, formally adopting a pnCCyB framework could provide predictable insurance against a cutback in lending following systemic shocks. Offering even more explicit "forward guidance" on the future policy settings (including the conditions and timeframe for the buffer rebuild) could reduce incentives for capital hoarding. These considerations must be balanced against the benefits deriving from the flexibility and credibility of the current arrangement (i.e., the HCSF's "early approach" regarding the build-up of the CCyB), and communication challenges that may arise from formally setting a positive neutral component to a cyclical instrument.

The medium-term calibration of the positive neutral rate for the CCyB over a suitably long transition period should consider capital losses under a moderate shock scenario and

structural characteristics of the banking system. Although system-wide losses under a moderate shock scenario appear manageable at present, for some banks the usability of a CCyB release may be partly constrained by the leverage ratio and the MREL requirements. In combination with the absence of other releasable buffers, this may support a relatively high positive neutral rate to further mitigate the risk of pro-cyclical lending. However, this should be balanced against the fact that buffer usability will be mitigated by the ongoing capital adjustments under Basel III, and that low profitability remains an issue for French banks.

Authorities should continue to closely monitor the vulnerabilities in the non-financial corporate sectors and stand ready to raise the CCyB rate if warranted. If non-financial corporates (NFCs) vulnerabilities continue to worsen, a higher CCyB rate would provide releasable capital and protect credit in the event of an adverse shock and would be consistent with the HCSF's current approach for setting the CCyB. Authorities could also consider a broader sSyRB to cover all corporate exposures, particularly given the lifting of the large-exposure sSyRB.

French NBFI macroprudential oversight has been proactive and should continue to be vigilant to emerging risks. Insurers are supervised by the Autorité de contrôle prudentiel et de résolution (ACPR), and the investment fund industry is overseen by the Autorité des marchés financiers (AMF). Authorities have ex-post tools for crisis management (including the suspension of redemptions) and have encouraged the adoption of liquidity management tools (LMTs) for funds ahead of European Union (EU) regulations. The AMF is also an active participant in macroprudential authority, unlike many jurisdictions.

Table 1. France: Recommendations on Macroprudential Policy Framework and Tools

Recommendations	Agency	Timing[1]
Further strengthen HCSF's institutional framework by adopting stronger governance arrangements for meetings. (¶ 12)	MoEF, HCSF	I
Strengthen transparency and public accountability by making publication of vote outcomes, HCSF recommendations and opinions the default, with limited exceptions, publishing votes of individual members, and requiring regular testimonies in the Parliament about HCSF work. (¶ 16)	HCSF, MoEF	I
Explicitly empower the HCSF to make public recommendations to member institutions on tools entrusted to them with a 'comply or explain' mechanism, and to the MoEF (¶ 24).	MoEF, HCSF	I
Strengthen HCSF communications framework, including by instituting regular reviews of strategy and adopting other communications best practices. (¶ 21)	HCSF	ST
Continue to enhance data availability for effective surveillance of risks, including on residential real estate lending, FX hedging by corporate borrowers, interconnectedness, and derivative and repo markets. (¶ 35-36)	HCSF, ACPR	ST

Table 1. France: Recommendations on Macroprudential Policy Framework and Tools (concluded)		
Recommendations	**Agency**	**Timing[1]**
Improve monitoring of investment fund redemption risk through data sharing on fund liability structures. (¶ 36)	ACPR, BdF, AMF	ST
Regularly conduct system-wide liquidity stress tests and continue to be vigilant to emerging risks. (¶ 43)	AMF, ACPR, BdF	ST
Formalize the availability of releasable capital buffers by improving guidance regarding the neutral level of the credit protection reserve (CCyB), even when cyclical systemic risks are not yet elevated. (¶ 54)	HCSF	ST
Continue closely monitoring vulnerabilities in banking and non-financial corporate sectors and stand ready to increase CCyB rate if needed. (¶ 72)	HCSF	ST
Enhance effectiveness of borrower-based measures (BBMs) by broadening their coverage. (¶ 65-66)	HCSF	MT
Continue to effectively manage resources allocated to financial stability analysis. (¶ 30)	HCSF, Trésor, BdF, AMF, ACPR	MT
[1] Timing: I: Immediately; ST: short term= less than 1 year; MT: medium term= 1-5 years.		

INTRODUCTION[2]

1. French authorities play a key role in the macroprudential policy framework alongside European entities. Under the European Single Supervisory Mechanism (SSM), national authorities in France, along with the ECB, are assigned specific responsibilities regarding macroprudential policy instruments as outlined in the Capital Regulations Directive (CRD) and Capital Regulations Regulation (CRR). French authorities have the power to initiate and implement macroprudential measures, although these actions must be notified to and coordinated with the ECB. The ECB reviews the measures taken under EU laws and can enforce stricter 'top up' measures when necessary.[3] Additionally, the ESRB oversees macroprudential matters at the EU level, which includes France. The ESRB's tasks involve collecting and analyzing data, identifying and assessing systemic risks, issuing warnings when appropriate, and collaborating closely with other bodies within the European System of Financial Supervision (ESFS).

2. The CRD/CRR establishes a range of macroprudential policy tools at the European Union level, but the establishment of other important tools remains at the discretion of the national authorities. The CRD/CRR introduce, among others, the CCyB, the systemic risk buffer and capital surcharges for systemically important institutions. Stricter risk weights or an increase in the minimum loss given default for exposures secured by residential or commercial property are also possible (Articles 124 and 164 of CRR). The so-called "flexibility package" (Article 458 of the CRR) also provides for tools in the hands of macroprudential authorities regarding the level of own funds, Large Exposure (LE) limits, public disclosure requirements, level of the capital conservation buffer, liquidity requirements, risk-weights for targeting asset price bubbles in the residential and commercial property sector, and intra-financial sector exposures. On the other hand, the establishment of a range of macroprudential tools is outside of the scope of the current CRD/CRR, and under the direct responsibilities of national authorities. This includes borrower-based tools such as loan-to-value caps and debt-service-to-income caps, as well as loan-to-deposit caps and margin and haircut requirements. These tools can be established and defined at the country level in addition to those contained in the CRD/CRR. In France, HCSF is the designated authority for macroprudential policy.

3. This technical note assesses France's macroprudential framework and the calibration of tools. It evaluates (i) the institutional framework (Section II), (ii) the operational capacity (Section III), and (iii) the adequacy of the current macroprudential settings based on the vulnerabilities

[2] This technical note (TN) was prepared by Gurnain K. Pasricha, Senior Financial Sector Expert in the Monetary and Capital Markets Department. The review was conducted during the period of March 5-19, 2025, and considers the legal and regulatory framework in place and the practices employed at the time. The mission team would like to thank current and former external members of the HCSF, Direction Générale du Trésor (DG Trésor), the BdF, the ACPR, the AMF, the Autorité des Normes Comptables (ANC) and representatives from the private sector for their excellent cooperation and fruitful discussions.

[3] Top up powers apply to any tool envisaged in the EU legislation (CRR/CRD), including the CCyB, and supplementary capital buffers for global and other systemically important institutions (G-SIIs and O-SIIs). https://www.ecb.europa.eu/pub/financial-stability/macroprudential-measures/html/index.en.html

identified in the FSAP (Section IV). The evaluation is conducted in accordance with IMF guidance, as detailed in the Staff Guidance Note (IMF, 2014a), its background note (IMF 2014b), and additional IMF policy documents.

INSTITUTIONAL FRAMEWORK

4. A robust institutional framework is essential for effective macroprudential policy implementation. It must ensure a clear willingness to act and mitigate biases that cause inaction. The macroprudential authority should have a defined mandate, accountability, and communication channels to enhance legitimacy when addressing systemic risks. The framework should support the ability to act against evolving threats through a strong legal framework, comprehensive toolkit, timely data access, effective surveillance, and operational independence. Additionally, effective coordination and cooperation among domestic and international agencies in risk assessment and mitigation is crucial while preserving distinct policy functions.

A. Principle I: Willingness to Act

5. The macroprudential framework should be designed to counter inaction bias. Policymakers may hesitate to implement macroprudential measures due to concerns about short-term costs or pressures from political and industry stakeholders. It is essential to design the macroprudential framework in a way that encourages a proactive stance, enabling authorities to make difficult decisions and safeguard financial stability over the long term (IMF, 2014a). Key design elements include a clear mandate, strong involvement of the central bank, a well-defined objective, as well as transparency and accountability mechanisms (IMF, BIS, and FSB, 2016).

Mandate

6. The HCSF is the designated macroprudential authority in France. The HCSF is chaired by the Minister of the Economy and Finance (henceforth, the Minister) and brings together the Governor of the BdF (henceforth, the Governor) who is also Chair of the ACPR, the Vice-Chair of the ACPR (who has special responsibility over insurance supervision), the Chair of the AMF, the Chair of the ANC, and three qualified members ("personnalités qualifiées"). The qualified members are selected by the Minister and the Presidents of the two assemblies of the Parliament (National Assembly and Senate), on the basis of their expertise in the field of monetary policy, finance, or economics for a term of five years.

7. The formal mandates of the HCSF and its member institution for financial stability provide a basis for "willingness to act". The HCSF has a formal mandate to help mitigate and prevent systemic risks. To achieve this goal, the HCSF has five intermediate objectives that guide the operational implementation of its macroprudential policy: (i) mitigating and preventing excessive credit growth and leverage; (ii) limiting overreliance on short-term funding or excessive risk mismatch, and mitigating market illiquidity; (iii) limiting direct and indirect exposure concentrations; (iv) limiting the systemic impact of misaligned incentives with a view to reducing moral hazard; and (v) strengthening the resilience of financial infrastructures. In addition, and consistent with IMF

guidance, the HCSF, the BdF, ACPR, and AMF also have formal mandates for financial stability, which further enhances the willingness to act (Table 2). The HCSF is also responsible for facilitating cooperation and exchange of information between the institutions that its members represent.

8. The institutional setup of the HCSF provides a strong role for the BdF. BdF has a special role as the Governor of the BdF (henceforth, the Governor) is the only HCSF member empowered to propose the implementation or adjustment of legally binding macroprudential tools (e.g., countercyclical capital or systemic risk buffer), i.e. to utilize the hard powers of the HCSF, and may disclose these proposals publicly if deemed useful. This gives the Governor an effective veto over the hard powers of the HCSF. The BdF and the ACPR also provide independent analysis monitoring the macroprudential measures in place.

9. HCSF has taken steps to enhance the role of external members since the 2019 FSAP. The three external members ("personnalités qualifiées") are appointed for three-year terms based on their academic and research expertise, and bring an important independent perspective, potentially countering inaction bias. They participate in the discussions and the vote during the HCSF meetings as other members. Since the 2019 FSAP, there have been steps taken to increase their engagement, by holding thematic workshops between the authorities and the external members prior to each HCSF meeting. These members can also be involved in topical studies and provide guidance on the HCSF work program.

10. HCSF decision-making follows clearly prescribed rules which give discretion on meeting schedule, agenda and casting votes to the Chair. The Chair alone can convene meetings and set the agenda, though any member may suggest agenda items. The agenda must include the BdF Governor's quarterly CCyB proposal, and generally includes an overview of financial sector risks, a thematic item, and monitoring of macroprudential measures. HCSF aims for consensus but has defined voting rules: decisions on hard powers require at least four votes in favor, while other decisions need a simple majority (quorum is half the members). The Chair casts a vote in case of a tie.

11. However, current governance arrangements leave room to substitute written procedures for meetings for extended periods and may limit the scope of discussions. Currently, the Minister is the only one who can call the meeting and set the agenda (although members can propose items). The Code Monétaire et Financier (CMF) Art. 631-2 states that the HCSF meetings take place, when convened by the Chair, at least four times a year and as necessary. In 2024, three written procedures were held (to take CCyB and reciprocity decisions) in place of meetings, precluding a full discussion of vulnerabilities and needed tools.[4] The discussions at HCSF meetings are generally limited to tools at its disposal – member institutions or the tools at their disposal (e.g.: leverage ratio limits for funds or stricter risk weights for real estate exposures) are generally not discussed.

[4] France had a caretaker government in place from 15 July to 5 September 2024, which may have impeded one meeting from taking place.

Table 2. France: Macroprudential Institutional Framework	
Macroprudential authority	
HCSF (Haut Conseil de stabilité financière).	Designated macroprudential authority. Set up in July 2013. Consists of eight members: Minister for the Economy (Chair), Governor of the BdF, Vice-Chairman of the ACPR, Chairman of AMF, Chairman of ANC, three qualified members ("personnalités qualifiées"). Meets when convened by the Chairman at least four times a year and as necessary.
Other institutions with their own mandate	
BdF (Banque de France).	Central bank with an explicit mandate for financial stability. The Governor of the BdF has the monopoly of proposals regarding macroprudential tools over which the HCSF has hard powers, and the ability to issue a public statement on his proposals. The BdF jointly with Trésor provides the secretariat of the HCSF and jointly with the ACPR is responsible for the calibration and monitoring of the macroprudential instruments at the disposal of the HCSF.
ACPR (Autorité de contrôle prudentiel et de resolution).	Direct supervisor of banks (less significant institutions or LSIs) and insurers. Participant in the SSM for the supervision of the systemically important banks (SIBs). Designates O-SIIs in France; responsible for macroprudential tools based on an individual assessment of institutions (for example—higher real estate risk weights; higher minimum loss given default). Jointly responsible with the BdF for calibrating and monitoring HCSF's macroprudential instruments. Conducts analyses on macroeconomic impacts on institutions' solvency and profitability, including stress tests and quantitative studies, and implements specific CRR-defined policy tools for macroprudential purposes.
AMF (Autorité des marchés financiers).	Financial markets authority. Direct supervisor of financial markets and investment funds. The AMF is the sole authority responsible for setting certain macroprudential tools applicable to investment funds (e.g.: leverage limits for alternative investment fund managers, or AIFMs). Takes account of the objectives of financial stability throughout the EU and the European Economic Area (EEA) and contributes to financial stability as part of its mission of maintaining orderly financial markets and investor protection. The AMF provides analysis on financial markets topics that may create risks.
ANC.	Accounting Rules Authority. The ANC brings expertise (including legal expertise, notably in the drafting of decisions) and helps identify specific issues associated with accounting standards.
Source: French authorities.	

12. While the HCSF is well-functioning overall, stronger rules on HCSF governance would reinforce willingness to act and effective decision-making. To ensure effectiveness, the HCSF should meet in person (or in virtual or hybrid modes) and meetings held as written procedures (as happened three times in 2024) should be avoided. HCSF governance should be enhanced by adopting a rule that tightly limits the number of meetings a year that can be held as written procedures (and narrowly defines the exceptional circumstances for these), and provisions that allow meetings to be convened by a majority vote of members rather than only by the Chair.[5] The agenda of the HCSF could include a discussion of macroprudential tools at the disposal of HCSF or its member institutions when warranted.

Accountability and Communication of Macroprudential Policy

13. Legal accountability supports operational independence, and clear communication reinforces accountability of policy. Clear communication fosters willingness to act, promotes public understanding of the need for measures, and enhances legitimacy of macroprudential policy. The main principles of macroprudential policy communications are similar to those for monetary policy communication: clarity and transparency (with discretion); regularity; timely accessibility to target audiences; consistency; and at different levels of technicality, to broaden the audience.

14. The HCSF is legally accountable to the national parliament. The HCSF is required by law to send its annual report to the President of the two parliamentary chambers (both Senate and National Assembly, art. L631-2-2 of the CMF). This report is similar to a financial stability review and presents the diagnosis and the analysis which underpin the HCSF's macroprudential policy. It reviews the work of the HCSF over the past year or over a longer horizon. The report also presents thematic analyses on topics that the HCSF has deemed useful to signal to public attention. While the HCSF Chair may be called to appear before the committees on Finance of both chambers to discuss its work, they have not been called to do so. The HCSF rules of procedure are posted on its website.

15. Public accountability provides the bedrock for operational independence and should be strengthened, including through greater transparency. While decisions to act on hard powers are automatically published, those not to act are not, and decisions on publishing HCSF opinions and recommendations are voted on by members. Further, when a proposal by the BdF Governor is voted down, this is not published by the HCSF (though the Governor is free to make his proposals public). Greater transparency in decision-making will promote accountability. Specifically, the HCSF should adopt a rule that by default, unless the HCSF votes otherwise, it should publish all its recommendations and opinions, as well as information about any actions on hard powers that are proposed by the Governor but voted down. Votes of each member on decisions should also be published, to establish individual accountability.[6] While the Chair and Governor regularly testify in

[5] For example, the bylaws of the United States Financial Stability Oversight Council (US FSOC) state that "The Council shall meet at the call of the Chairperson or a majority of the voting members then serving, but not less frequently than quarterly. The location of all meetings shall be 1500 Pennsylvania Avenue, N.W., Washington, D.C., unless the Chairperson advises the Council members of an alternate location."

[6] For example, the United States FSOC publishes voting records of members.

front of the Parliament in their own capacity, public accountability could also be strengthened by requiring the Chair and Governor to testify in front of the Parliament about HCSF work at least once a year.[7]

16. The HCSF has articulated a strategy for financial stability and announced its review in June 2025. The strategy was published in 2014 and lays out the ultimate and intermediate objectives of macroprudential policy and the approaches to achieve them (HCSF, 2014). Parts of the strategy have been periodically reviewed, with the methodology to set the CCyB unveiled in the HCSF's 2022 annual report and experience with the implementation of the strategy reviewed in its 2024 annual report. At its June 2025 meeting, the HCSF decided to conduct a full review of its strategy, with the revised strategy to be published in March 2026, along with its annual report.

17. The HCSF uses various avenues of communication, but largely targeted to experts, and press conferences are held by the secretariat. The HCSF uses various avenues - annual reports, press releases, frequently asked questions, public notes and consultations - to communicate about macroprudential policy. While its annual report is similar to a financial stability review and describes the macro-financial environment, it does not in general discuss the evolution of broad-based credit gaps or the financial cycle indicators that underpin its CCyB decisions and does not contain an overall assessment of vulnerabilities and risks. No press conference is held at its release. Press conferences are held after HCSF meetings by the secretariat. Press releases are issued after HCSF meetings, summarizing the meetings and communicating the decisions of the HCSF, but the meeting dates are not released more than a week in advance. Further, no press releases were issued in 2024 after the three written procedures (although the reciprocity decision and recommendation resulting from the October 2024 procedure were published). The HCSF also occasionally holds public consultations, but the last was in October 2019, on the risks in the residential real estate sector. The Governor regularly comments on HCSF decisions in his press appearances and some public notes have been written by HCSF members, however most key publications are in technical language.[8]

18. HCSF publishes a detailed set of data quarterly on credit developments, but other key datasets linked to HCSF measures are not published or linked on HCSF webpage. The HCSF publishes quarterly data on credit developments, including credit gap measures and supplementary indicators on credit to households and non-financial corporates.[9] Other key data that guide HCSF decisions on the tools over which it has hard powers, for example the forward-looking financial cycle indicator, the characteristics of new housing loans, etc., are not linked on the HCSF webpage. While

[7] For example, the Chairperson of the US FSOC is required to appear before the Congress after the annual report is submitted, to testify "on the report, and the efforts, activities, objectives, and plans of the Council". See the by-laws of the FSOC: https://home.treasury.gov/system/files/261/The%20Council%26%23039%3Bs%20Bylaws.pdf

[8] In his public comments on HCSF decisions such as on the BBMs, the Governor has explained their motivations and implications. Deputy-Governor Bénassy-Quéré has also published a public note on the unexpected yet growing notoriety of the HCSF.

[9] Publishing this and other data as datasets rather than single quarter data points in a pdf would facilitate better public analysis.

the HCSF member institutions are responsible for monitoring the implementation of the HCSF tools and maintain data warehouses that contain many of the relevant indicators, there is no centralized access for the public to key indicators relevant for understanding and assessing HCSF decisions. The data in the charts and tables in HCSF annual report are also not published along with the report.

19. Effectiveness and appropriateness of macroprudential policy are evaluated by the HCSF, its member institutions and ESRB/ECB evaluation processes. The HCSF assesses the effectiveness and calibration of its measures in place regularly, including via market consultations and adapts as needed (see also section III.D). For example, the LE limit measure was allowed to lapse and was replaced by a sectoral systemic risk buffer in 2023, and in 2024 several technical adjustments were made to borrower-based measures based on feedback from credit institutions. The HCSF's 2024 annual report looked back on 10 years of HCSF activity and evaluated the impacts of the borrower-based measures. At the European level, the ECB has top-up powers and performs regular assessments of the appropriateness of the macroprudential stance at the national level. The ESRB regularly reports on systemic risks at both the union-wide and national levels. ESRB warnings serve to publicly notify the HCSF of arising risks, fostering timely action. When risks are assessed as particularly high, the ESRB issues a warning or a recommendation, the latter compelling the HCSF to comply or explain. [10]

20. Communication of macroprudential policy can be further improved through periodic strategy reviews and adopting best practices (Box 1). Regularly scheduled updates of the overall HCSF strategy would ensure that the strategy remains fit for purpose as HCSF tools and the financial environment evolve, while fostering public awareness about HCSF. Adopting other best practices in communications would help the HCSF build public understanding of the benefits of the policies and policy credibility and help establish a narrative for future actions. The schedule for HCSF meetings and the date for the release of the annual report should be pre-announced by more than a week and a press conference by the Minister and the Governor should be held at least once a year, at the release of the annual report. Press releases and meeting summaries should be issued after every meeting, although detailed minutes are not recommended to be published. While the HCSF publishes a quarterly report outlining the key indicators that guide its decisions on the CCyB rate, it should also publish or link to the datasets used for its other measures on its website. Adopting a layered communication strategy, particularly for the annual report and borrower-based measures, and continuing to hold regular public consultations regarding existing and proposed measures, would improve public buy-in for the measures by incorporating feedback in the measures' design at the outset and raising public understanding of the policies.

[10] For example, the build-up of risks in the housing sector led to an ESRB warning being issued for France (ESRB Alert/2019/12 of 27 June 2019).

Box 1. Macroprudential Policy Communications: Principles and Best Practice Examples

Clear communication is essential for the accountability of macroprudential policy, fostering a willingness to act, promoting public understanding, and enhancing legitimacy (IMF, 2014a). The principles of communication for macroprudential policy align with those for monetary policy: it should be clear, transparent (with discretion to avoid risky behavior or sensitive disclosures), regular, timely for target audiences, consistent over time, and layered for different audiences.

Key communication tools for macroprudential policy include: (i) a published and maintained policy strategy that fosters predictability while retaining discretion and countering inaction bias; (ii) regular risk assessments that maintain the authority's commitment to action; (iii) communication of policy intentions and actions to improve policy transmission; (iv) impact assessments that measure success and build credibility; and (v) meeting records that create a narrative for future actions and enhance accountability.

Some examples of best practices in macroprudential policy communications can be found in the United Kingdom, Ireland and the United States.

United Kingdom (UK)

The UK Financial Policy Committee (FPC) reviews its macroprudential policy strategy every three years. Further, the FPC publishes its approach to using its hard powers, with detailed policy statements available for each of the tools on which FPC has hard powers. These policy statements identify the core indicators that guide the decisions on these tools. Data on these indicators is kept updated on the FPC webpage.

The Financial Stability Report (FSR) includes a summary of key messages and a non-technical summary that can be more easily understood by the wider public (layered approach to communications), before explaining the key risks and macroprudential policy decisions in the main body of the FSR.

The FPC's remit requires them to discuss the cost-benefit analysis of their decisions, as detailed in the November 2022 speech by Colette Bowe.[1] The FPC webpage provides dates of upcoming FPC meetings. After each meeting, the FPC publishes its views of the risks to the UK's financial system and how to tackle those risks in a Summary and Record. These records are detailed and start with a headline judgement and policy actions. There is clear communication guidance for FPC members to avoid confusion for the public or the media, and this is published online.

Ireland

Central Bank of Ireland's communications on borrower-based measures is an example of best practice in such communications. The central bank prepared the public before announcing the measures, by publishing several research papers on how these tools work. They issued a formal consultation on their plans, setting out the rationale, summarizing the research findings and suggesting a tentative calibration. The central banks' webpage includes helpful information for the public to understand and assess the measures: it provides an infographic, frequently asked questions (FAQs) and explainer on mortgage measures, as well as the definition of first time home-buyers (for whom the measures are more relaxed), as well as the relevant data.

Box 1. Macroprudential Policy Communications: Principles and Best Practice Examples (concluded)

The central bank conducts an annual evaluation of the measures, and periodic evaluation of the full framework of the borrower-based measures. The latter is done as a public consultation and the last was done in 2022 (See Mortgage Measures Framework Review | Central Bank of Ireland).

However, good timing was also important in limiting public opposition to the measures and in enhancing their effectiveness: the measures were introduced in 2015 when the Irish property market was just coming off a trough in valuations. This helped reduce opposition since "affordability" of property was not a hotly debated issue at the time. The measures were subsequently helpful in containing the buildup of vulnerabilities as property prices rose.

United States

The US FSOC is required by law to hold at least quarterly meetings, which can be called either by the chairperson or by a majority of voting members. The FSOC's website publishes its governance documents, which include it by-laws as well as a transparency policy. The FSOC also allows members of the public to sign up for email updates from the council.

[1] Bowe, Colette (2022) Building trust in macroprudential policy – speech by Colette Bowe | Bank of England, November 2, 2022.

B. Principle II: Ability to Act

21. The macroprudential framework should grant the designated macroprudential authority sufficient powers to act. To ensure timely and effective action, the willingness to act should be backed by the necessary powers to act. These powers include information collection powers to assess evolving risks; rulemaking and calibration powers to be able to react to changing risks, and designation powers to ensure that macroprudential policies impact all relevant institutions. Each of these powers can vary in strength (IMF, 2013). 'Hard' powers provide direct control to the macroprudential authority, allowing for prompt and decisive action. 'Semi-hard' powers enable the policymaker to issue formal recommendations, often accompanied by a 'comply or explain' mechanism. 'Soft' powers limit the policymaker to merely express an opinion.

22. The institutional arrangements provide broadly adequate powers to allow HCSF to act. HCSF has hard powers to calibrate a wide range of macroprudential tools subject to ECB top-up on some tools (Table 3), as well as soft powers to issue opinions or recommendations likely to prevent any systemic risk and any threat to financial stability. The HCSF has the power to collect information and data that it deems needed for systemic risk analysis and macroprudential policy. [11] Art. L.631-2-2 of the CMF empowers the HCSF to gather any necessary information from any third parties (i.e., representatives of credit institutions, financing companies, investment firms, investment management companies, portfolio management companies, insurance companies, mutual and pension funds as well as any other relevant actor). ACPR identifies O-SIIs (which once designated,

[11] While HCSF has broad powers to seek information from all entities, currently there isn't a framework to penalize third parties that do not provide quality information. However, no such experience has been reported by the authorities so far.

are supervised under the SSM) and for insurers, global systemically important institutions (G-SIIs). Currently, there is no process for the identification of non-bank non-insurance systemically important institutions or financial market infrastructures (FMIs) at the national level, unless the FMI is a credit institution.

23. However, HCSF's powers vis-à-vis members institutions should be made explicit. In line with the European legal framework, certain tools are assigned to HCSF's member institutions, and HCSF lacks explicit power to recommend their activation through a comply or explain mechanism (semi-hard power). However, there is strong coordination within HCSF and the BdF/ACPR via the "Pôle de stabilité financière" or the financial stability hub, and HCSF has privately recommended actions to AMF and ACPR in the past that were acted on. While the law does not prevent HCSF from recommending to the MoEF, it is not explicitly authorized, and no recommendations have been made previously. Explicitly empowering HCSF to issue comply or explain recommendations to its member institutions would enhance compliance amid regulatory differences and ensure transparency.[12] Adopting the comply or explain mechanism does not mandate that all HCSF recommendations are made under this mechanism; rather, the HCSF would have the option to use it when warranted. The HCSF could still make recommendations without "comply or explain" and/or vote not to publish this recommendation, via a majority vote of its members. Additionally, explicitly enabling HCSF to recommend to the MoEF (by majority vote) would strengthen its capacity to propose new macroprudential tools, to extend the regulatory perimeter.

[12] While HCSF is a collegial body, differences in views between regulators can arise. For example, for the European Commission's targeted consultation on a macroprudential framework for NBFIs, the BdF responded together with the Eurosystem, while the AMF and DG Trésor provided their own joint response.

Table 3. France: Main Macroprudential Instruments Available to the French Authorities

Instrument	Intermediate Objective	Responsible Authority	EU Legal Basis	French Legal Basis
Countercyclical capital buffer.	To safeguard the banking system from losses linked to materialization of cyclical systemic risk and support sustainable credit provision to the real economy over the financial cycle. This buffer accumulates during high-risk periods and is released during crises, rather than serving as a credit cycle management tool.	Designated authority (HCSF), on the proposal of the BdF Governor. ECB has top-up powers.	Articles 130 and 135–140 CRD.	Article L. 631–2–1 of the CMF.
Systemic risk buffer (including on sectoral exposures).	To limit direct and indirect exposure concentrations; prevent and mitigate long-term noncyclical systemic or macroprudential risks; strengthen resilience of FMI.	Designated authority (HCSF), on the proposal of the BdF Governor. ECB has top-up powers.	Articles 133 and 134 CRD IV.	Article L. 631–2–1 of the CMF.
Flexibility package: national measures that are stricter in terms of requirements for own funds, LE, public disclosure, the level of the capital conservation buffer, liquidity, risk weights for targeting asset bubbles in the property sector, and intra financial sector exposures. In France, the targeted population includes finance companies, in addition to the population targeted in CRR.	To moderate and prevent excessive credit growth and leverage; limit overreliance on short-term funding and excessive maturity mismatch and mitigate market illiquidity; limit direct and indirect exposure concentrations; limit systemic impact of misaligned incentives and reduce moral hazard.	Designated authority (HCSF), on the proposal of the BdF Governor.	Article 458 CRR.	Directly applicable, Article L.631–2–1 4° of the CMF.
Setting of credit standards (including loan-to-value, loan-to-income, and debt service-to-income ratios). Recently powers extended to set credit standards on lending from investment funds too.	To moderate and prevent excessive credit growth and leverage.	Designated authority (HCSF), on the proposal of the BdF Governor.		Article L. 631–2–1 of the CMF.
Additional own funds requirements (buffer) for global systemically important institutions and other systemically important institutions.	To limit systemic impact of misaligned incentives and reduce moral hazard.	Competent authority (ACPR). ECB has top-up powers.	Article 131 CRD.	Article L. 612–1 of the CMF.
Stricter risk weights for exposures secured by residential or commercial property.		Competent authority (ACPR).	Article 124 CRR.	Directly applicable.
Increase in the minimum loss given default for exposures secured by residential or commercial property.		Competent authority (ACPR).	Article 164 CRR.	Directly applicable.
Modulate the rules for setting up and taking over the profit-sharing provision for all or a subset of the insurance companies.	To mitigate market illiquidity.	Designated authority (HCSF), on the proposal of the BdF Governor and in consultation with ACPR.		Article L. 631–2–1 of the CMF.

Table 3. France: Main Macroprudential Instruments Available to the French Authorities (concluded)

Instrument	Intermediate Objective	Responsible Authority	EU Legal Basis	French Legal Basis
Precautionary measures towards the insurance sector: temporary restrictions on—some transactions/activities (incl. premium collection or payment); free disposal of assets; surrender value payment (for part or all portfolio); reallocation of assets or early payments (i.e., corresponding to a loan guaranteed by the insurance contract); and dividends (or members' shares) distribution.	To mitigate market illiquidity.	Designated authority (HCSF), on the proposal of the BdF Governor and in consultation with ACPR.		Article L. 631–2–1 5° of the CMF.
Limits to the level of leverage that an AIFM is entitled to employ with respect to the AIFs under its management. In the EU, leverage of undertakings for collective investment in traded securities (UCITS) is capped by law, while, following recommendations by the ESRB, the ESMA published guidelines on December 17, 2020, for the operationalization of the macroprudential leverage limits for alternative investment funds (AIFs), which became effective on August 23, 2021.[1]	To cap investment fund leverage.	Competent authority (AMF), upon prior notification of ESMA, the ESRB and other competent authorities of considered AIFs.	UCITS: Directive 2009/65/EC (Article 83 for Financial Leverage; Article 5 1-3 for Synthetic Leverage). AIFM: Directive 2011/61/EU (Article 25). ESMA Guidelines on Article 25 of Directive 2011/61/EU.	Article L.214–24–20 of the CMF.
The AMF is entitled to demand the (temporary) total suspension of subscriptions and redemptions on any French UCITS or AIF ("when exceptional circumstances so requires and if the interest of the unitholders, the shareholders, or the public so commands").	To mitigate run risk.	AMF.		Articles L.621-13-2 and L.621-13-3 of the CMF.
The AMF is entitled to impose a ban on short selling.	To mitigate destabilizing speculative behaviors.	AMF.	Regulation (EU) No. 236/2012 of the European Parliament and of the Council of 14 March 2012 – Short Selling Regulation (SSR).	
The AMF is entitled to suspend trading when an exceptional event disrupts the regular operation of a trading platform,	To limit systemic impact.	AMF.		Article L421-16 of the CMF.

[1] Upon recommendation of the ESRB on liquidity and leverage of investment funds, the macroprudential powers of national and EU authorities and their coordination are under review.
Sources: Banque de France, ACPR.

C. Principle III: Effective Cooperation and Coordination

24. The HCSF is explicitly responsible for facilitating cooperation and exchange of information. Article L.631-2-1 of the French monetary and financial code gives HCSF the task of ensuring "cooperation and exchange of information between the institutions that its members represent, as well as between these institutions and itself."[13] Under this article, the ACPR and the AMF have the legal right to provide the HCSF with information protected by professional secrecy. [14] In addition, the AMF, the ACPR and the BdF have signed some data sharing agreements (Contrats de liaison applicative).[15] In addition, the BdF chairs the "Groupe de place Robustesse" (GPR), which comprises the main French financial actors (both public and private) and prepares to respond to financial shocks. During the COVID-19 crisis, the AMF, the ACPR and the BdF organized daily calls to monitor the situation and exchange information on the sectors under their respective remits, demonstrating effective domestic cooperation using an ad-hoc process when needed.

25. The French institutions in charge of financial stability collaborate with European institutions, share supervisory data and adhere to the reciprocity framework. In addition to the formal notification and review mechanisms under EU law (¶1 and ¶16), the French authorities take part in various working groups and committees at the ECB and ESRB level.[16] Further, the AMF is represented in all of ESMA's standing committees, and participates in its quarterly risk survey.[17] These groups and committees are dedicated places for discussions on risk analysis and macroprudential policy measures, and to foster dialogue with the European institutions. The French authorities submit data on significant institutions (SIs), which the ECB directly oversees, and adhere to information sharing mandated by ESRB Recommendation ESRB/2019/18 by banks headquartered in another Member State or a third country. In its most recent compliance report of this

[13] Other provisions also authorize the exchange of information between French authorities: Article L. 631-1 of the CMF requires the BdF, the ACPR and the AMF to cooperate, and to provide to each other the necessary information to fulfill their respective mandates.

[14] However, this information exchange arrangement only covers data owned by one of the Member Authorities. Data owned by the ECB and the European system of central banks (ESCB), such as on derivatives in European Markets Infrastructure Regulation (EMIR) database, on repurchase agreements in Securities Financing Transactions Data Store (SFTDS), on securities holdings in Securities Holding Statistic (SHS), on securities statistics in centralized securities database (CSDB) and in the credit register AnaCredit, cannot be shared among the different HCSF's members and member institutions even though the BdF contributes to the data collection on the French segment.

[15] Under these data sharing agreements, for example, the AMF received the granular security-level portfolio data for French investment funds (Organismes de Placements Collectifs (OPC) Titres database) collected by the BdF, and data on French insurers' holdings of investment funds collected by the ACPR.

[16] These working groups include for example, the Macroprudential Forum (MPF), the Financial Stability Committee (FSC), the Macroprudential Policy Group (MPPG), the Macroprudential Analytical Group (MPAG) and related task forces and working groups at the ECB level as well as the General Board, the Advisory Technical Committee (ATC), the Instrument Working Group (IWG), the Analysis Working Group (AWG), the Non-bank Expert Group, and other task forces, ad-hoc assessment teams and working groups at the ESRB level. The Treasury and the BdF collaborate to participate in the Expert Group on Banking, Payments and Insurance (EGBPI).

[17] In particular, the AMF participates in ESMA's Risk Standing Committee and its Investment Management Standing Committee. The AMF Chair is a member of ESMA's Board of Supervisors as well as of the ESRB General Board.

recommendation, the HCSF and ACPR were assessed as having "sufficiently explained inaction". The HCSF also adheres to the European reciprocity framework and has reciprocated several decisions adopted by European national authorities on the systemic risk buffers and conditions on real estate lending.

26. In addition to the European interactions, French authorities are actively engaged in global dialogues through their participation in various international forums and committees. These international forums include the Group of 20 (G20), the Committee on the Global Financial System (CGFS), the Financial Stability Board (FSB), the Basel Committee on Banking Supervision (BCBS), International Organization of Securities Commissions (IOSCO) and the International Association of Insurance Supervisors (IAIS). In particular, the AMF is a founding member of IOSCO's Financial Stability Engagement Group (FSEG), a senior level group aiming at enhancing IOSCO's management of financial stability issues and engagement with the FSB on NBFI topics, and AMF chair co-leads the FSEG. The ACPR is authorized under the CMF to cooperate with non-EU/non-EEA supervision authorities within the framework of a memorandum of understanding (MoU) and has signed a number of such MoUs.

OPERATIONAL CAPACITY

27. The capacity to effectively assess systemic risk is crucial for making timely and appropriate adjustments to macroprudential policy. To achieve this, it is essential to have adequate resources, a comprehensive set of monitored indicators, a diverse array of models, and streamlined policy-making processes in place. This section evaluates the HCSF's operational capacity based on these criteria.

A. Resources

28. The HCSF is supported by a dedicated secretariat and the significant expertise of its member institutions. The Financial Stability Department of the BdF (DSF) and DG Trésor's Financial Sector Economic Analysis Division jointly provide the HCSF secretariat. The HCSF is well supported by the significant expertise of its member authorities. The co-secretariat sets the groundwork for discussions and leads ad hoc working groups that may involve other teams within the BdF, DG Trésor, or other authorities. It produces quarterly monitoring of financial risks and relevant ad hoc studies. The ACPR and the BdF jointly calibrate and monitor the macroprudential instruments available to the HCSF, collaborating through the financial stability hub. The ANC offers expertise, including legal support for drafting decisions, and helps identify issues related to accounting standards.

29. The resources allocated to financial stability analysis will need to continue to be managed effectively, to promote continuity and given the expanding range of responsibilities. The HCSF has successfully harnessed the extensive expertise of its member institutions and the deep knowledgebase and proficiency of their staff to conduct cutting-edge analyses of various financial stability risks, including state of the art models for calibration and evaluation of tools, an ongoing system-wide liquidity stress test and emerging areas such as crypto

assets, and environmental, social and governance considerations. To continue fulfilling its mandate — particularly as it expands into areas that will shape future policymaking and seeks to strengthen macroprudential policy communications — careful resource management will continue to be important.

B. Data Availability and Gaps

30. Surveillance and systemic risk assessment relies on comprehensive quantitative and qualitative information and has been significantly enhanced since the 2019 FSAP. The HCSF reviews a broad set of indicators in regular systemic risk monitoring, which now encompasses the banking sector, households, corporates, real estate, NBFIs and financial markets, as well as interconnectedness, concentration and climate risks (Annex Table 2). A core list of indicators is updated quarterly and provided to HCSF members in several monitors, each focusing on a specific dimension of systemic risks (cyclical and structural). The indicators used derive from micro and macro data as well as survey-based and qualitative data, for example bank lending survey and market intelligence exercises conducted by AMF, and model-based analysis. Together, they offer a comprehensive overview of vulnerabilities for the financial and non-financial sectors in France and the eurozone. Further, more detailed data and analysis is presented in thematic studies covering, for example, crypto assets, CRE risks and others.

31. Authorities gather and maintain a variety of specialized databases. For example, the Fiben database managed by the BdF contains accounting, rating and default information for French non-financial companies both on a consolidated and unconsolidated basis. The BdF and ACPR collect a variety of data on bilateral exposures, for example, data on loans to financial and non-financial agents by banks (for AnaCredit database maintained by the ECB), large bilateral exposures of banks to any counterparty, international securities identification number (ISIN)-by-ISIN portfolio holdings (stocks and bonds) of insurance companies and funds.

32. Ad-hoc data collections are launched when deemed useful. The HCSF carries out market intelligence exercises on specific issues that may require the need for additional monitoring and supervision (e.g., residential and commercial real estate (RRE and CRE, respectively), leveraged finance, etc.). These exercises bring together representatives from all relevant HCSF members and take the form of interviews with a representative panel of market participants. When required, the identified data gaps may also lead to more regular data collection exercises, which take the form of regular surveys or ad hoc data collection exercises by the supervisory authorities. Recent examples of such exercises include surveys on RRE and CRE by the ACPR, custodian daily reports on MMF redemptions by AMF in 2020 and ad-hoc data collection on some highly leveraged hedge funds done by the AMF.

33. Authorities have used novel methods to fill some data gaps. As credit data is available with a significant lag, the BdF and HCSF have relied on nowcasting techniques and forecasts, particularly for estimating cyclical systemic risks and informing decisions related to the countercyclical capital buffer (CCyB), and for assessing NFC vulnerabilities. AMF has invested heavily in data analysis and systems, including novel data collection techniques. As there is no domestic or

EU-level reporting of LMTs adopted by each fund, between late 2018 and 2020, the AMF and the BdF developed a text-mining program to detect keywords relating to LMTs in fund prospectuses (Darpeix and others, 2020, 2021 and 2024).

34. However, some data gaps persist in RRE and CRE sectors. Following up on the ESRB recommendation to close real estate data gaps (Recommendation ESRB/2016/14), the BdF has been developing public data-based commercial property price indices for France, offering sectoral and regional breakdowns. However, data on foreign actors' footprint on the French CRE markets is lacking. There is no credit register for households, although a credit register covering firms has been built for the European data collection AnaCredit. However, this credit register does not have information on whether firms borrowing in foreign currency are hedged. In 2024, loan level data matching borrower and property characteristics cover only about 30% of the outstanding loan volume. There is scope to enhance surveillance of housing market risks by enhancing loan-level data, as well as data on lending and lending standards to SCIs.[18]

35. Data sharing and availability on NBFIs, derivatives markets and interconnectedness could be enhanced. In the NBFI sector, certain funds such as family offices face lower levels of reporting requirements, making it difficult to track their activity precisely. More broadly, knowledge of fund liabilities remains incomplete. The ACPR regularly shares with the AMF data on the holdings of investment funds by French insurers. However, this data sharing has been based on one-off data sharing agreements. Improved monitoring of investment fund redemption risk through data sharing on fund liability structures is recommended. Data quality and timeliness on interconnectedness, and on derivative and repo market data could also be further strengthened (TN on Systemic Risk Analysis).

C. Systemic Risk Assessment and Analysis

36. Macroprudential policy decisions in France are based on a comprehensive set of indicators, model-based analysis and judgement. Indicators include regular statistics, survey and qualitative data described in the previous section, complemented by model-based indicators (e.g., composite indicator of systemic stress; SRISK measure, distance to default model, real estate and asset price valuation models) and a strong set of analytical tools (early warning system, non-linear smooth local projection models, structural vector auto-regression (SVAR) models, dynamic stochastic general equilibrium (DSGE)-type models, etc.). Consistent with best practices, a guided discretion approach is used wherein key indicators are used for risk identification, but the decision is based on judgement that considers all relevant information.

37. The HCSF's member institutions have strong analytical capacity and framework for monitoring systemic risks. The BdF publishes, on a semi-annual basis, a financial stability report, prepared jointly with the ACPR, which provides a high-quality in-depth assessment of key

[18] As noted in footnote 15, some data gaps exist because of ECB and ESCB restrictions on their central banks' ability to use and share important EU-level datasets. The AMF does not have access to CSDB and SHS data, limiting its ability to access information on funds' liability side as well as identification of securities via ISIN codes.

vulnerabilities and risks.[19] The methodological framework to analyze and assess vulnerabilities and risks was updated in 2021. The AMF also publishes an annual description of market trends and assessment of vulnerabilities in its Markets and Risk Outlook. The analyses in these reports form the basis of the monitoring presented to the HCSF. Both reports and their thematic chapters as well as the additional research and analysis published by these institutions apply or develop cutting edge tools to analyze and assess risks and inform on the calibration of tools. [20]

38. The decisions on CCyB calibration rely on comprehensive assessments of financial stability risks and the trade-offs associated with the buffer rate. [21] The HCSF considers a broad set of indicators and models when determining the appropriate level of the CCyB. Key indicators include the Basel gap but also broader measures of credit gaps, credit growth trends, and sectoral lending conditions, which help identify excessive risk-taking in the financial system. A forward-looking financial cycle indicator of credit and valuation dynamics in the financial and real estate markets is computed, that incorporates BdF forecasts of the underlying variables. This financial cycle indicator was used to inform the optimal timing for implementing the current CCyB rate. The HCSF also evaluates bank resilience through capital adequacy metrics like Common Equity Tier 1 (CET1) ratios, stress test results, and profitability measures, to assess the ability of banks to absorb potential shocks without restricting credit supply. Finally, the potential impact of adjusting the buffer requirements (on credit supply, bank resilience, inflation and output) and the interactions between their adjustment and monetary policy are assessed using a DSGE model (Espic and others, 2024). This model also allows an assessment of the interactions and complementarity between buffer requirements and BBMs. A composite index of systemic stress as well as banks and non-financial firms' responses to regularly conducted surveys regarding availability of credit are used to gauge potential opportunities for releasing the counter cyclical buffer.

39. The decisions on the calibration of borrower-based tools are based on a careful assessment of risks in the residential real estate sector. Financial stability risks are identified through indicators and model-based analyses across three dimensions: housing market dynamics, household indebtedness, and banks' exposure to housing-related risks. Housing market imbalances are estimated based on simplified versions of four macroeconomic models that define fundamental prices primarily as a function of household income, the user cost of housing and housing supply (Warisse, 2017; ECB, 2015; Caldera and Johansson, 2013; Avouyi-Dovi and others, 2014). Microsimulations are used to estimate the expected impact of the BBMs on credit volumes, house prices and the share of borrowers excluded from the market to inform the initial calibration and debt-service to income (DSTI) distribution simulations to inform the adjustments in 2023. The BdF recently developed a SVAR model to estimate the fundamental drivers of housing prices and housing credit volumes, including the roles of monetary policy and borrower-based measures.

[19] https://www.banque-france.fr/fr/publications-et-recherche/nos-principales-publications/rapport-sur-la-stabilite-financiere

[20] See for example Couaillier and Scalone (2022), Couaillier and Henricot (2023), Espic and others (2024), Fourel and Schwenninger (2024), Le Moign and Benhami (2021), Nouail (2024).

[21] The HCSF approach to calibrating the CCyB was updated and is described in its 2022 annual report.

Work under development aims at using comprehensive vector error correction models (VECM) that feature long term cointegrations for credit supply and house prices, and a model to identify underlying property bubble.

40. The sectoral systemic risk buffer on large banking exposures to highly leveraged non-financial corporations was calibrated to balance increasing resilience with preventing a shift to market-based finance. Several indicators were used to assess NFC's debt-servicing capacity including their indebtedness ratio (debt-to-GDP, debt-to-value added, debt-to-earnings before interest, tax, depreciation and amortization (EBITDA), debt-to -equity ratios), interest coverage ratio, debt service ratio and liquidity ratio, both at the macro and micro levels. Different pass-through assumptions, from sSyRB to firm borrowing costs, were applied in assessing the impact of the sSyRB rate. To monitor the measure, ACPR required banks to report on a quarterly basis information on their exposures and risk-weighted assets (RWA) and NFC debt levels for a subset of NFC that was broader than those which the measure targeted (i.e. those that were close to meeting the criteria but had not yet met it). As announced on 2 June 2025 and effective 18 June 2025, the HCSF lifted the sSyRB, noting that the specific risks it was designed for have now diminished, and that its prudential buffer impact is now insignificant.

41. For stress-testing purposes, the authorities employ a suite of quantitative models. For microprudential stress-tests, Banque de France and ACPR use their internal top-down model, STORM, which is derived from their previous model MERCURE (Camara and others, 2015). The UCITS and AIFM Directives require asset managers to conduct liquidity stress tests on a regular basis with asset and liability stress scenarios. AMF published its guidelines for these stress tests in 2017, while ESMA published its own liquidity stress-testing guidelines in 2020. The stress parameters set forth in the guidelines are updated annually. Building on a pilot exercise in 2020 of climate stress tests for both banking and financial sectors, the ACPR conducted one solely for insurance undertakings in 2023-24 and published the results (ACPR, 2024). ACPR conducts stress tests of the main housing loan guarantors ahead of the EBA stress tests with the same scenarios, and the results are used in the EU wide exercise for quality assurance of the French banks' projections.

42. The BdF, ACPR and AMF are currently working on a system-wide stress-test (SWST) involving banks, insurers, and investment funds. In June 2024, the BdF initiated discussions with ACPR and AMF to conduct a system-wide stress test on the French market in 2025. The exercise will be split into bottom-up and top-down approaches. The bottom-up approach will involve banks, insurers and investment funds. The bottom-up exercise involves two stages – in the first stage, the supervised entities assess the impact of the scenario on their balance sheets and describe their management actions. The authorities will aggregate the individual actions and adjust the scenario to reflect the collective impact of the first-round reactions. The second round is then run with the revised scenarios. In parallel, the top-down part will be run on the same scenarios and will use and improve the framework developed at the Euro system level (Sydow and others, 2024). The results are expected to be published in March 2026. The system wide stress tests follow other interconnectedness studies between investment funds and other financial institutions that

authorities have conducted in the past, for example, Benhami and others (2018) and Chretien and others (2020).

43. ACPR complies with the EBA guidelines for common identification criteria for O-SIIs. The ACPR identifies O-SIIs on an annual basis, and the decisions on the buffer rate to be applied to the identified O-SIIs remain at its discretion. The SSM is informed of the decision and may decide to apply a higher buffer (so-called "top-up" power). The methodology developed for French O-SIIs is available online on ACPR webpage dedicated to Systemic entities of the banking sector. The ACPR assesses the potential systemic importance of insurers on a yearly basis as part of IAIS' systemic risk assessment process for G-SIIs. The analysis is based on a large range of indicators related to the size, interconnectedness and complexity of the groups. This assessment also includes qualitative considerations.

D. Evaluating Policy Effects

44. The impacts and side effects of macroprudential measures are regularly assessed, in line with best practices. Key lending metrics for residential real estate are reported to the ACPR monthly, and compliance data with borrower-based measures is published on the HCSF website. Since the introduction of the BBMs, the HCSF has consulted with the banking sector and made operational adjustments based on industry feedback. Additionally, from March to July 2024, the HCSF conducted a quantitative assessment of existing BBMs, publishing the results in its 2024 annual report, relying on four model-based analyses from the BdF or DG Trésor. The HCSF continuously monitors capital buffers, including the impact of foreign CCyB decisions. The ACPR monitors at a quarterly frequency bank exposure to highly indebted corporates before these become large enough to breach the thresholds for the systemic risk buffer. Potential circumvention of the sSyRB through adjusted EBITDA and NFC subsidiaries outside France was assessed and found to be immaterial. The BdF is also evaluating the effects of various capital-based measures (CCyB, SyRB, and O-SII/G-SII buffers) and reciprocity measures implemented in Europe over the past decade. The AMF published quantitative impact evaluation of several of its actions (for example, the short-selling ban introduced in 2020, the incentivization of LMTs, etc.).[22]

45. Additional work is underway to further assess the impact of the BBMs. Complementary work is underway to evaluate the effect of these measures on defaults and arrears, drawing on the approach of van Bekkum and others (2024). In addition, current research investigates the ability of these measures to mitigate the impact of interest rate and/or inflation increases on household consumption and investment, using state-dependent macro econometric frameworks in the spirit of Cumming and Hubert (2023). Within these frameworks, the response of macroeconomic variables can be conditional on the distribution of lending standards, which are directly influenced by BBMs.

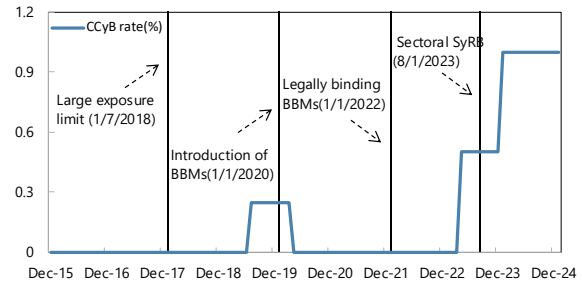
[22] Benhami and others (2022), Darpeix and others (2024).

SYSTEMIC RISKS AND MACROPRUDENTIAL POLICY SETTINGS

46. The HCSF has enacted several measures to deal with emerging threats since the 2019 FSAP (Figure 1 and Annex Table 3). In 2019, to mitigate rising household indebtedness and deteriorating lending standards, it introduced BBMs through DSTI and loan maturity limits. The DSTI limit has been more binding in the high interest-rate environment as most loans that exceed the HCSF limits exceed due to DSTI. After a reduction to 0 during COVID-19, the Countercyclical Capital Buffer (CCyB) was raised in April 2022 (effective April 2023) from 0 to 0.5 percent and again in December 2022 (effective January 2024) from 0.5 to 1 percent. The 2018 hard LE limit of 5 percent of Tier 1 Capital on French SI's to heavily indebted corporates risked becoming more binding in the high-interest environment and encouraged substitution to market-based finance. Consistent with 2019 FSAP recommendations, this limit was changed in August 2023 to a sectoral systemic risk buffer in the form of a CET1 surcharge of 3 percent for exposures to highly leveraged non-financial companies above 5 percent of Tier 1.[23] This measure succeeded in curbing concentrated exposures of banks to individual highly indebted firms. After its June 2025 meeting, the HCSF announced that it intended to lift this measure, as specific risks it targeted had diminished.

Figure 1. France: Key Macroprudential Policies

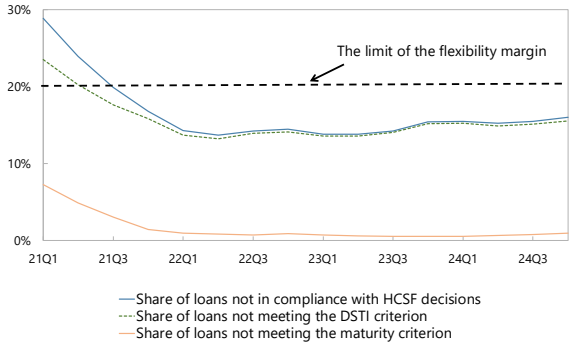
Key HCSF Decisions Since 2016.



Source: ESRB.

Share of New Housing Loans Not in Compliance with HCSF Decisions.

(Quarterly average of monthly data)



Source: ACPR.

A. Broad-based Vulnerabilities and Tools

47. Credit growth moderated in the period of higher interest rates, while private debt remains elevated. With the delayed impact of monetary tightening, credit growth moderated, and the credit-to-GDP gap turned negative (Figure 2). Despite the protracted slowdown in credit growth in the period of rising interest rates, private sector debt levels remain elevated, particularly for NFCs. Private bank credit to GDP ratio is high relative to peers, driven by NFC debt. Financial conditions

[23] Highly leveraged non-financial companies were defined as those whose ratio, between total financial debt, including undrawn credit lines, and EBITDA is greater than 6 or negative, when assessed at the highest level of consolidation.

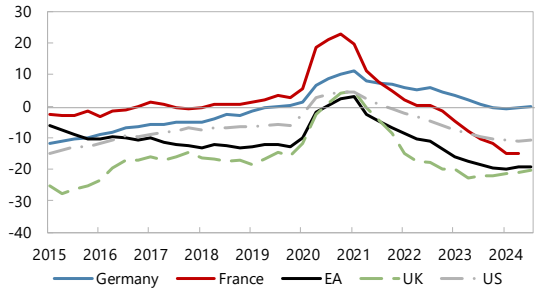
eased in 2024, driven by easing of monetary policy stance and the price of risk. Corporate credit growth is likely to remain subdued due to soft loan demand and still tight credit standards. However, retail credit is set to rebound on the back of stronger household loan demand and loosening credit standards. Banks' capital ratios remain well above regulatory requirements, with heterogeneity across banks. The leverage ratio in the banking system is comfortably above the regulatory minimum of 3 percent.

Figure 2. France: Broad Credit Conditions

With rising interest rates, the financial cycle cooled....

Credit to GDP Gap

(Percent, Quarterly Frequency)

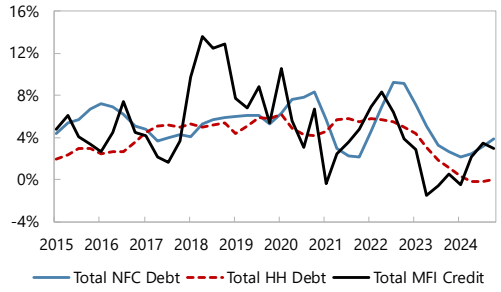


Source: Haver Analytics.

...as private credit growth moderated.

Credit Growth

(Year-Over-Year, Percent, Quarterly Frequency)



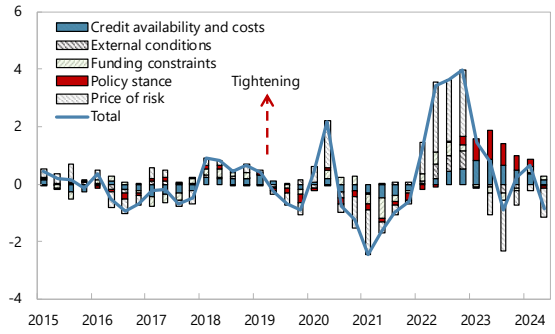
Note: Unconsolidated data.

Sources: ECB; and IMF staff calculations.

Financial conditions eased in 2024, driven by interest rates and the price of risk....

Financial Conditions Index

(Contribution to Quarter-Over-Quarter Change, Unscaled FCI)

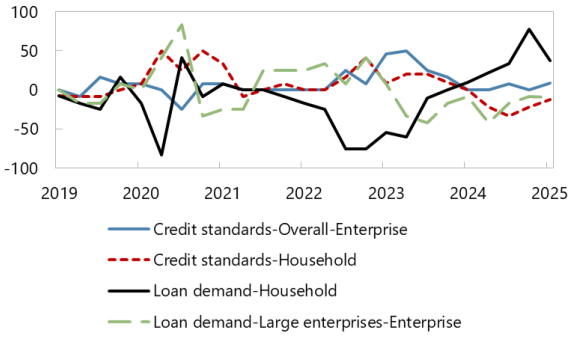


Source: Borraccia and others (2023).

...leading to easing of credit standards.

Credit Conditions and Loan Demand

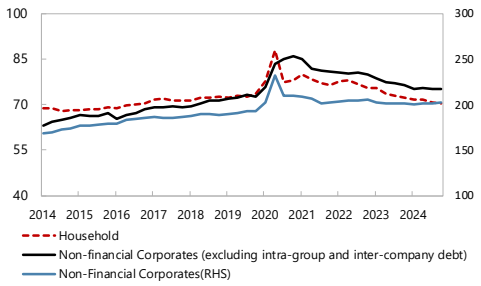
(Percent, Quarterly Frequency)



Source: ECB.

Figure 2. France: Broad Credit Conditions (concluded)

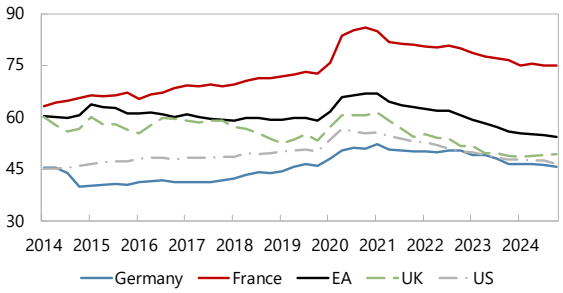
Non-financial corporates' debt levels remain elevated relative to historical levels....
Debt
(Percent of GDP, Quarterly Frequency)



Note: GDP is seasonally and working day adjusted.

Sources: Banque de France, Haver.

...and relative to peers.
Bank Credit to Non-financial Private Sector
(Consolidated Debt, Percent of GDP, Quarterly Frequency)



Source: Banque de France.

48. Called the "credit protection reserve" in France, the objective of the CCyB is to strengthen credit resilience during a financial downturn, by protecting the banking system from potential losses stemming from exacerbated systemic risk. The HCSF's approach – updated in its 2022 annual report – is based on "guided discretion" with the final decision being a discretionary assessment that incorporates both quantitative risk analysis and qualitative judgment. The HCSF approach follows a structured four-step framework: identifying risks, identifying the CCyB target rate in the light of these risks, assessing banking resilience, and ex-ante impact assessment on macroeconomic conditions of the proposed rate. Each quarter, the HCSF assesses the level of cyclical systemic risks and sets a buffer rate that balances the tradeoffs between the potential benefits in terms of financial stability and bank resilience, and the potential negative impact on provision of credit to non-financial entities. The CCyB is released in the event of systemic shocks.

49. While France entered the COVID-19 pandemic with a low CCyB buffer of 0.25%, authorities have been proactive in rebuilding this releasable buffer post-COVID. The HCSF increased the level of the credit protection reserve to 0.5 percent in April 2022 (effective April 2023) and to 1 percent in December 2022 (effective January 2024). In the calibration of the CCyB since 2022, the HCSF has relied on its assessment of medium-term risks and persistence of financial vulnerabilities. Currently, credit gaps are negative, but the levels of debt and debt service ratios (DSR) of the French non-financial private sector are high relative to historical norms and other eurozone countries, highlighting potential financial vulnerabilities. The level of these vulnerabilities guided maintaining the rate, even as the housing market underwent an orderly adjustment.

50. HCSF's approach to calibrating the CCyB shares similarities with the positive neutral CCyB (pnCCyB) framework, focusing on a preemptive buildup of capital buffers. The pnCCyB framework is a methodological approach - rather than a new buffer – which aims for a systematic, rules-based accumulation of the CCyB early in the financial cycle, even when cyclical systemic risks are not yet elevated. Both approaches aim to prevent credit contractions after moderate shocks and allow for a positive CCyB rate early in the financial cycle, with the HCSF approach facilitating this

through its focus on medium term vulnerabilities. Like pnCCyB, HCSF promotes proactive buffer accumulation when banks can internally generate capital without harming credit provision, and release in the event of systemic shocks.

51. However, there are key differences between the HCSF approach and pnCCyB approach. The HCSF approach focuses on elevated cyclical systemic risks, rather than maintaining a minimum buffer rate in normal times. Although HCSF has offered some guidance on buffer release circumstances, this guidance could be further clarified by outlining indicators of stress that would supplement judgement in guiding the release and the rebuild post-release. In adopting a pnCCyB approach, it is important to clarify in the framework, as well as communication at the time of release, that capital buffers will not be rebuilt prematurely, thereby providing confidence for banks in using the buffers. The guidance should emphasize that the reactivation will take place only when (a) banks' provision of credit is not still constrained by capital requirements and the build-up of capital is not expected to create such constraints; and (b) banks' profitability is restored to a level that allows the rebuilding and maintaining of voluntary capital buffers (Miettinen and Nier, forthcoming).

52. The availability of releasable capital buffers should be formalized by improving guidance regarding the neutral level of the credit protection reserve. While the HCSF's tailored approach allows for a nuanced response to financial risks, formally adopting a positive neutral level (i.e., a positive rate even when cyclical systemic risks are not yet elevated), would be beneficial. It would ensure provision of insurance against stresses that arise without a prior credit boom, reduce the burden of proof on authorities of providing evidence of elevated financial vulnerabilities and better position the financial system to reach a desired level of resilience when vulnerabilities are increasing. The clear, rule-based framework offered by the pnCCyB could provide more predictable insurance against a cutback in lending following systemic shocks and "forward guidance" to markets on the future policy settings and circumstances for release, likely reducing incentives for capital hoarding. These considerations must be balanced against the benefits deriving from the flexibility and credibility of the HCSF's early approach regarding the build-up of the CCyB, and communication challenges that may arise from formally setting a positive neutral component to a cyclical instrument under the current EU legislation.

53. The calibration of the positive neutral rate for the credit protection buffer can be informed by an estimation of capital losses in a moderate shock scenario. In general, the pnCCyB should ensure that a meaningful buffer is available for release during periods of financial stress, while limiting the capital burden on banks through the cycle. If the neutral buffer is set too low, it is unlikely to influence banks' behavior or prevent credit rationing in times of stress.

54. An exercise was conducted using the solvency stress test to help estimate such losses (Box 2). The exercise yields a range of losses under moderate scenarios of between 1.7 to 2.6 percent of RWA. At present, high precautionary buffers in combination with the CCyB would likely

be sufficient to enable banks to continue lending following moderate macroeconomic shocks.[24] However, if precautionary buffers were lower, the release of the current CCyB might not be sufficient to ensure banks continue to lend under these moderate downturn scenarios.

55. The medium-term calibration of the neutral rate for the CCyB over a suitably long transition period should consider capital losses under a moderate shock scenario as well as structural characteristics of the banking system. Some structural characteristics of the French banking system that would support a relatively higher neutral rate include low usability of buffers (due to the leverage and TLAC ratios becoming binding before releasable capital buffers are exhausted for some banks)[25], absence of other accumulated releasable buffers and the absence of tools that mitigate vulnerabilities in the broader non-financial corporate sector. These considerations should be balanced against the fact that buffer usability will be mitigated by the ongoing capital adjustments under Basel III, and that low profitability remains an issue for French banks. While the neutral rate is set once adopted, authorities retain flexibility to adjust the pace of build-up to that level, considering the prevailing circumstances, including adjustment costs. They should also have the possibility of revising, as part of periodic reviews of the framework, the neutral rate itself as structural conditions and vulnerabilities in the stock of exposures evolve.

56. Capital buffers and BBMs are largely complementary. Both contribute to banking sector resilience and reduce macro volatility, but they operate through different transmission channels and have varying time lags. BBMs work on the flow and the riskiest borrowers, reducing their probability of default and/or loss given default. BBMs help reduce the build-up of debt and vulnerabilities in the residential real estate sector during a boom, reduce potential misallocation of capital to less productive uses, and lessen the volatility of indebted households' consumption responses when faced with shocks. Capital tools apply to the entire balance sheet or sectoral exposure of banks and help increase resilience and enhance banks' capacity to absorb shocks and continue lending. Thus, capital tools complement BBMs by improving resilience against already accumulated vulnerabilities. BBMs can serve as a partial substitute for capital buffers over the medium term as the risk profile of outstanding bank loans to the sector improves. However, the regulatory framework recognizes this substitutability by allowing improved risk characteristics of new mortgages to reduce risk-weighted assets and the required capital for capital buffer rates (Tereanu and others, 2022). The presence of BBMs in France therefore does not preclude the need for releasable capital buffers.

[24] Note also that French banks have global operations and parts of their balance sheet may be exposed to different buffer rates than applicable to French exposures (i.e., CCyB rates that are higher or lower than 1% and reciprocated systemic risk buffers). A weighted average of all applicable buffer requirements, as well as the leverage and MREL requirements should be taken into account to arrive at accurate measures of buffer requirements and effective management buffers. Effective management buffers can be significantly smaller than stated buffers when all applicable regulatory requirements are considered. See Mathur and others (2023) for an example from the UK.

[25] Buffer usability in French banks is lower than in banks of other European countries, including those that also host EU G-SIIs. See Leitner and others (2023).

Box 2. Calibrating Neutral CCyB Using Stress Tests: An Illustrative Exercise

Stress tests can be used to inform the calibration of the neutral CCyB rate. In this illustrative exercise conducted by the FSAP team, aggregate bank capital depletion in scenarios that were milder than the solvency stress tests in terms of GDP growth and employment losses were considered. Ten scenarios of increasing severity, with equally spaced incremental GDP shocks, from the baseline to the geopolitical scenario were considered (Box Figure 2.1). Equally spaced unemployment shocks were constructed to be associated with the GDP scenarios. This exercise excluded market risk, incorporated in the main solvency stress test as one-off unreversed market shocks, reducing the severity of the scenarios but making them more focused on GDP shocks. Credit risk PDs for households and NFCs were re-estimated consistently with each scenario, and net interest income and net fixed commission income were interpolated (See also, TN on Systemic Risk Analysis).

Conceptually, since the main aim of the releasable buffer is to ensure the ability of the banking system in aggregate to maintain provision of credit in a downturn, the main output of the stress test for the discussion of CCyB is the capital depletion suffered by banks (rather than their actual capital relative to a hurdle rate). As different scenarios lead to different capital depletions, these can provide a range of capital depletions $[D_L, D_H]$ to consider. Further, for the release to meet its objective of supporting credit, the calibration should also ensure that after the release and after the stress scenario has played out, banks would still have sufficient voluntary (management) buffer to make them confident enough to continue lending. The proposed range for the neutral rate of capital buffers can be written as the sum of the capital depletion (D) and the post-release minimum management buffer (B):

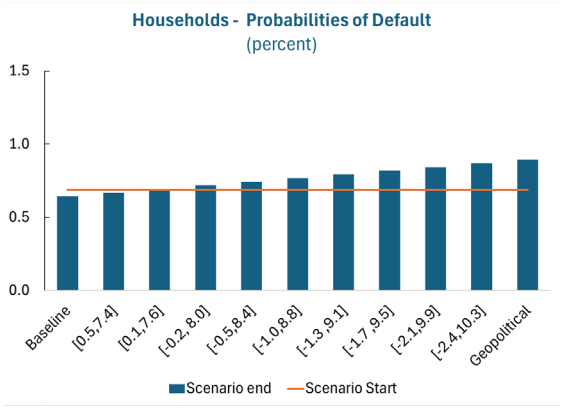
$$PNCCyB \in [B + D_L, B + D_H]$$

The results of the exercise are depicted in Box Figure 2.1 below. While household probabilities of default remain contained even in the more severe scenarios, the default probabilities for non-financial corporates rise significantly at the end of all scenarios. Five moderate scenarios starting with the first scenario with negative real GDP growth (i.e. the scenario with lowest GDP growth and peak unemployment rates of [-0.2, 8] and where the household default probability at the end of the scenario just exceeds the default probability at the start) to the one with lowest GDP growth and peak unemployment rates of [-1.7, 9.5] were considered in proposing a potential calibration range for the neutral CCyB. These scenarios yielded capital losses in the range of 1.7 to 2.6 percent of RWA. The results of this exercise should be combined with other analyses and the other considerations mentioned in the text (e.g. the minimum level of post-release management buffer considered), to arrive at the final neutral rate.

Box 2. Calibrating Neutral CCyB Using Stress Tests: An Illustrative Exercise (concluded)

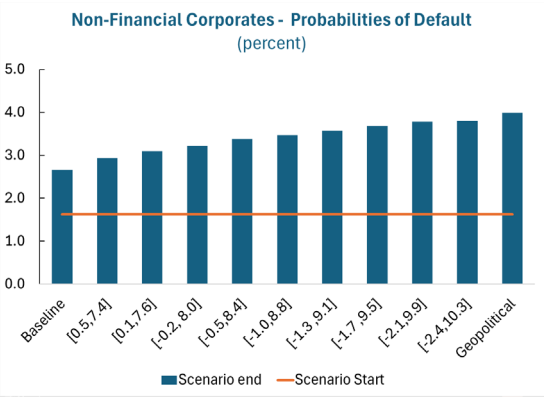
Box Figure 2.1. PNCCyB Calibration Using Stress Tests: Outcomes

Households' probabilities of default remain contained in moderate stress scenarios….



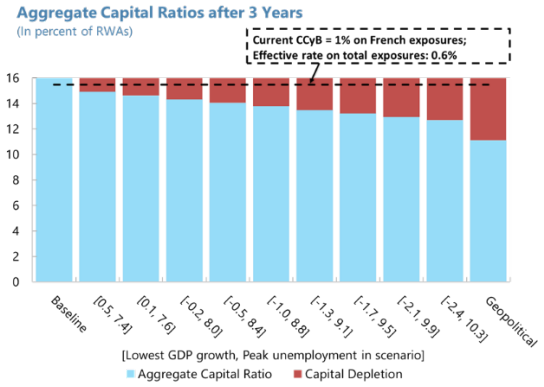
Source: IMF Staff calculations.

…but non-financial corporates' probabilities of default rise to elevated levels.



Source: IMF staff calculations.

Capital losses are larger than the current CCyB rate in France even in the mildest scenario.



Source: IMF Staff calculations.

B. Household Vulnerabilities and Tools

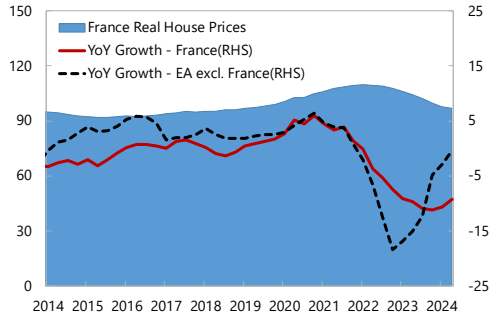
57. The housing market underwent an orderly adjustment starting in 2022, but activity appears set to pick up (Figure 3). Housing loan issuance declined sharply in 2023-24, and average DSTI (debt service-to-income) increased. However, real house prices appear to have troughed, and the market reportedly started to stabilize in early 2024 following slowdown in inflation, with certain areas starting to see moderate increases in prices. Housing affordability in France has evolved more favorably compared to peers. Household debt levels in France are above the euro-area average, while home ownership rates are below the euro-area average. Going forward, retail credit is set to rebound on the back of stronger household loan demand and loosening credit standards.

58. In 2019, to mitigate rising household indebtedness and deteriorating lending standards, the HCSF introduced BBMs through DSTI and loan maturity limits. The period 2015 to 2019 saw a boom in the housing market, with house price increase of 12 percent in nominal terms and 7 percent in real terms between 2015 Q1 and 2019 Q4, a significant increase in market

activity (transaction volumes of over 35 percent compared to long-term average and 16 percent higher housing loan production in 2019 compared to 2015) and a decline in lending standards. Following an ESRB recommendation, the HCSF introduced borrower-based measures in December 2019, in the form of DSTI limit and maturity limits on housing loans, with a flexibility margin (Table 4). The measures were initially introduced as a recommendation but became legally binding in January 2022. The BBMs have been modified twice to address operational challenges raised by the industry, such as the management of the flexibility margin across agencies within a group, and the seasonality of buy-to-let transactions.

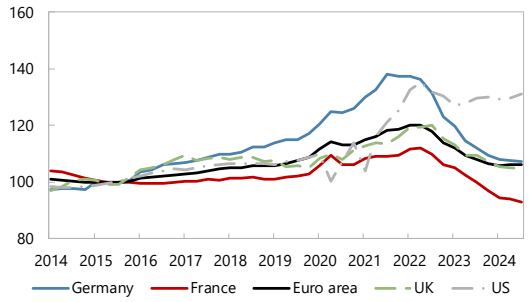
Figure 3. France: Housing Prices and Household Balance Sheet

Real house prices appear to have troughed....
Real House Prices
(LHS Indexed 2010 Q4 = 100, RHS In Percent)



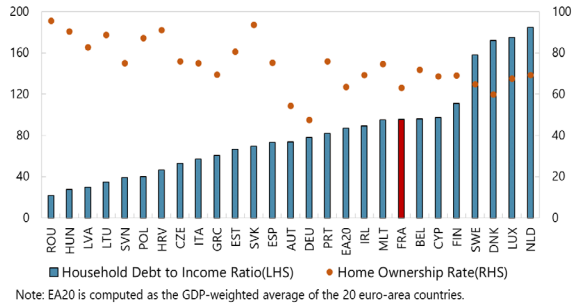
Sources: ECB and Banque de France.

...with housing affordability having evolved more favorably compared to peers.
House Price-to-Income
(Index 2015 = 100)



Source: Organization for Economic Co-operation and Development.

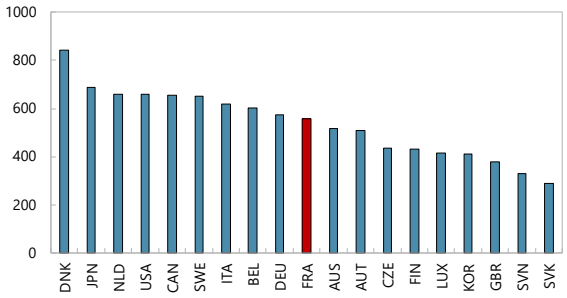
Household debt is relatively high compared to peers....
Household Debt and Homeownership Rate
(Percent, 2023)



Note: EA20 is computed as the GDP-weighted average of the 20 euro-area countries.

Source: Eurostat and IMF Staff Calculations.

...and households have relatively high net worth.
Household Net Worth, 2023
(Percent of Net Disposable Income)



Source: Organization for Economic Co-operation and Development.

Table 4. France: Timeline of Borrower-Based Measures in France

Date	Measure
Dec-2019	HCSF recommendation to banks: • DSTI limit: 33% • Maturity limit: 25 years • Flexibility margin: 15% of new housing loans, of which 75% at least allocated to primary dwelling (first time buyers (FTBs) and second and subsequent buyers (SSBs)) and for these loans, the debt-to-income ratio cannot exceed 7 years.
Jan-2021	Revision of the HCSF recommendation: • DSTI limit: 35% • Maturity limit: 25 years. 27-year maturity loan compliant in case of construction or renovation work (under specific conditions). • Flexibility margin: 20% of quarterly amount of new housing loans. >=30% allocated to FTBs, >=80% allocated to primary dwelling buyers
Jan-2022	Recommendation becomes legally binding
Jun-2023	• Technical adjustments: >=70% of flexibility margin allocated to primary dwelling buyers (instead of 80%). • Adjustment in compliance assessment (under specific conditions, compliance can be assessed based on cumulated new loan amounts over 3 quarters)
Dec-2023	• Exclusion of interest payments on bridge loans when assessing the borrower's DSTI ratio, provided that the bridge loan's loan to value ratio is less than or equal to 80% of the value of the marketed property. • To lower the threshold for renovation work above which house buyers are allowed to defer their loan repayments. • Further adjustments for assessing compliance.

59. The BBMs have supported prudent lending practices (Figure 4). The share of new loans above the DSTI limit started declining rapidly even before the BBMs became legally binding and stabilized at about 15 percent, as the share of loans with DSTI between 30 and 35 percent increased. The share of first-time home buyers – who have tended to have lower DSTI and lower probabilities of default – has increased, as a share of the flexibility margin was reserved for these borrowers and as the DSTI limit was more binding for second and subsequent buyers and buy to let investors. The average LTV ratio of new loans declined from its peak in 2020 - as borrowers needed to reduce LTVs to qualify under the DSTI and maturity limits - and the share of new loans to borrowers with debt ratio above 4.5 declined by about 20 percentage points.

60. Borrower based measures (BBMs) were perceived as limiting credit availability when interest rates were high. With the combination of high interest rates and high real estate prices, complaints were raised by real-estate industry and banks that the hard DSTI limits were limiting the ability of households to access housing financing. However, this may have been due at least in part to strict lending standards irrespective of the BBMs. Banks still had significant unutilized capacity in their flexibility margins and lending rates were lower than bond yields for the period when interest rates were rising rapidly.

61. A counterfactual analysis using solvency stress test scenarios and macro-micro model of household defaults confirms that the BBMs were appropriately designed at the time they were introduced. The analysis conducted using 2021 household finance and consumption survey and is therefore helpful in informing the tradeoffs under the stock characteristics that existed just after the current BBMs were imposed (See Box 3 and the TN on Systemic Risk Analysis). The analysis uses the stress scenarios from the current solvency stress tests and computes the household default probabilities under two counterfactuals. The two counterfactuals used were: (i) excluding borrowers with DSTI limits above 32 percent, and (ii) excluding borrowers with LTVs above 90 percent. The analysis finds that high DSTI and higher LTV loans were both riskier at the margin, but the higher DSTI borrowers more so, likely as high LTV loans are generally made to wealthier borrowers. Excluding the higher LTV borrowers that existed at the time reduces the default probabilities after three years by 17% in the geopolitical scenario and by 18% in the more severe recession scenario. As expected, excluding the higher DSTI borrowers has a larger impact - the PDs decline by about 58% at the end of both scenarios.[26] This suggests that the DSTI limit had a larger marginal impact on default probability than an LTV would have had.

62. The potential impact of an LTV limit on the riskiness of the loan portfolio is, however, likely to be larger than suggested by the exercise. To anchor the model predictions, the exercise uses historical default rates that do not include the recent period of housing market correction.[27] Recent data suggests that high LTV loans (LTV > 100%) issued in the few years before the housing market decline (2015-2019) were also more likely to default during the downturn (2022 Q2 – 2024 Q1) than prior (2020 Q2 – 2022 Q1). The loss given default on high LTV loans also increased during the recent period of price correction. While both high DSTI (DSTI > 35%) and high LTV loans were more likely to default during the downturn (seeing about 25% increase in PDs), and more likely to default in this period than their low ratio counterparts, the high LTV loans also saw an increase in their loss given default (LGD). High LTV loans are issued largely to wealthier and higher income borrowers. This means that their LGDs are historically lower than those of low LTV loans -the LGD of high LTV loans issued between 2015-2019 was 85% of that of low LTV loans in the period before the market correction. However, during the recent downturn, LGD of these high LTV loans increased to roughly equal the LGD of low LTV loans. This suggests that the expected loss of high LTV loans was higher than that of low LTV loans in a period of housing price correction - even though these loans are issued to wealthier and higher income borrowers, thus underscoring the importance of closely monitoring risks in this segment.

[26] DSTI limits by design target the probability of default, whereas LTV targets the loss given default.

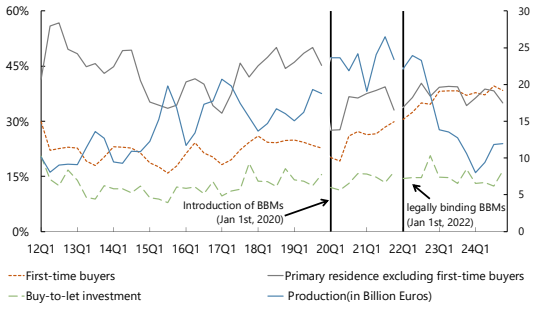
[27] The analysis follows the methodology in Gross and others (2022).

Figure 4. France: Characteristics of New Housing Loans

With rising interest rates, issuance of housing loans declined sharply in 2023-24…

Production of New Housing Loans

(Quarterly Average of Monthly Data)

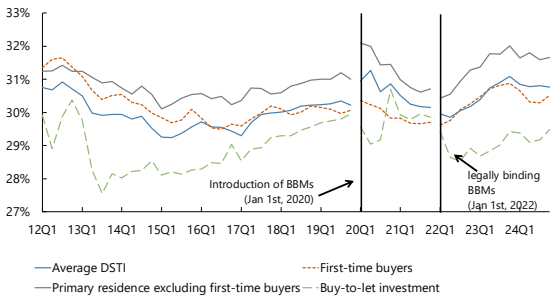


Source: ACPR and IMF staff calculations.

…and average DSTI increased. DSTI is highest among second and subsequent buyers of primary residence.

Average DSTI of New Housing Loans

(Quarterly Average of Monthly Data)

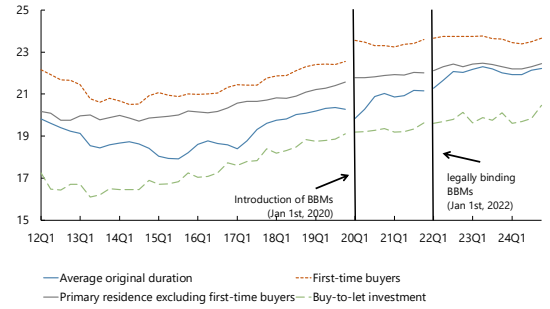


Source: ACPR and IMF staff calculations.

First-time buyers have highest original maturity…

Original Maturity of New Housing Loans

(Quarterly Average of Monthly Data)

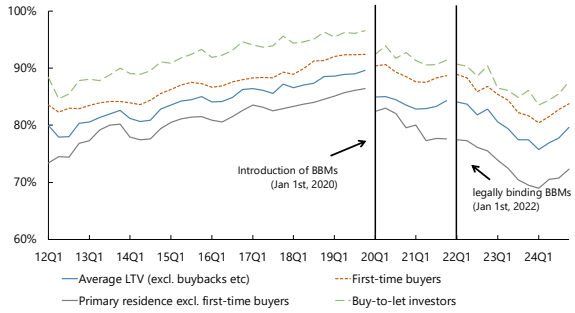


Source: ACPR and IMF staff calculations.

…while average LTV is highest among buy-to-let investors.

Average LTV of New Housing Loans

(Quarterly Average of Monthly Data)

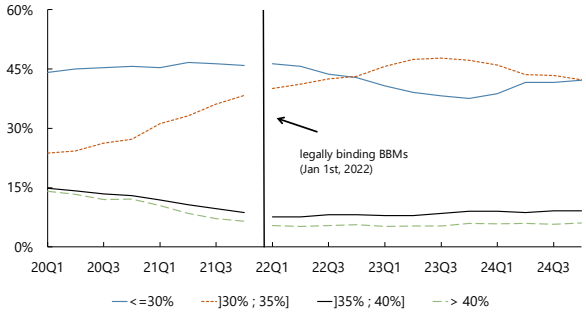


Source: ACPR and IMF staff calculations.

About 6% of new housing loans have DSTI above 40%…

Share of New Housing Loans, by DSTI Ratio

(Quarterly Average of Monthly data)

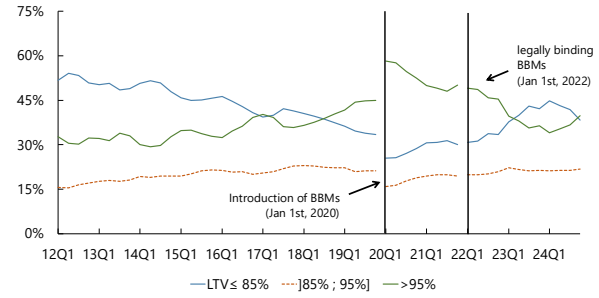


Source: ACPR and IMF staff calculations.

…and about 40% have LTV ratio over 95%.

Share of New Housing Loans, by LTV ratio

(Quarterly Average of Monthly Data)



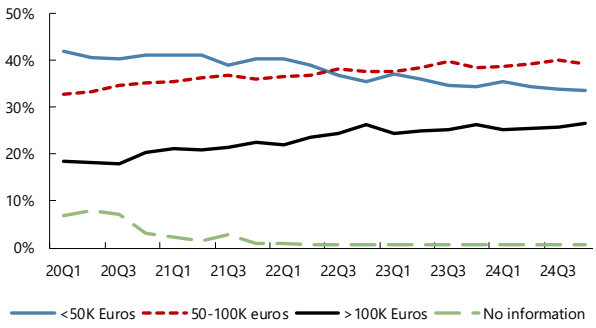
Sources: ACPR and IMF staff calculations.

Figure 4: France: Characteristics of New Housing Loans (concluded)

Share of low-income households in housing loans market has declined….

Share of New Housing Loans, by Borrower Income

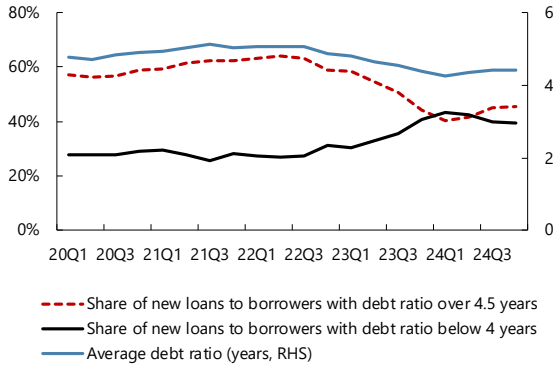
(Quarterly Average of Monthly Data)



…as has the share of highly indebted borrowers.

Share of New Housing Loans, by Debt Ratios

(Quarterly Average of Monthly Data)



Source: ACPR and IMF staff calculations.

Source: ACPR and IMF staff calculations.

Note: The jump in the series in 2020Q1 is due to a change in the methodology for compiling data on production of housing loans, which switched from number of transactions basis to value basis. The latest data point is 2024Q4.

Box 3. Household Default Analysis Using Macro-Micro Simulations

A counterfactual analysis leveraging solvency stress test scenarios and macro-micro model of household defaults assesses the riskiness of marginal loans around the time authorities set the limits. Two counterfactuals were analyzed: (i) a DSTI limit excluding borrowers above 32 percent, and (ii) an LTV limit excluding those above 90 percent (See also the TN on Systemic Risk Analysis). This analysis, based on the 2021 household finance and consumption survey (HFCS), helps clarify the choices present when the BBMs were introduced. The 2021 HFCS survey in France was conducted between September 2020 and March 2021, and the BBMs were first introduced as a recommendation in January 2020, becoming legally binding in January 2022.

The analysis calculates household default probabilities for solvency stress test scenarios, based on a structural model simulating default following loss of job and the assumption that a household defaults after depleting all financial assets post-unemployment, following Gross and others (2022). The PDs and LGDs are anchored on historical values from EBA risk dashboard. Simulations consider France's unemployment insurance and OECD data on unemployment outflows.

The results are depicted in Box Table 3.1 and show that high DSTI and higher LTV loans were both riskier at the margin, but the higher DSTI borrowers more so. Excluding higher LTV borrowers reduces default probabilities by 17 percent in the geopolitical scenario (from 0.53 to 0.44 percent) and by 18 percent in a severe recession (from 0.65 to 0.53 percent). Excluding higher DSTI borrowers has a greater effect, resulting in a 58 percent decline in default probabilities by the end of both scenarios. The results are as expected, as DSTI is likely to have a greater impact on the probability of default by limiting the share of borrower's income devoted to servicing debt, whereas LTV mainly caps loss given

Box 3. Household Default Analysis Using Macro-Micro Simulations (concluded)

default by reducing the loan amount relative to property value, especially in a market with full recourse lending, where the strategic incentive to default is already low.

As with any empirical exercise, there are important caveats to its interpretation: first, the exercise relies on 2021 survey data, missing shifts in distribution since then (see Figure 4). Second, sample after dropping the borrowers above threshold may not be fully representative of the population of borrowers after introducing a limit, both as the exercise does not account for a flexibility margin and bunching of borrowers within the margin after introduction of the limit. In the DSTI exercise 24% of borrowers are dropped from the sample, and 44% in the LTV exercise. This also implies that the changes in risk-weighted assets are more sudden and pronounced in this exercise than would be the case in practice (¶ 57). Third, it is unclear to what extent the survey captures the mortgages held by SCIs. Finally, default probabilities and LGDs for high LTV borrowers, excluded from the LTV counterfactual, are likely to rise more during price corrections, as evidenced recently (¶ 63).

Box Table 3.1. Household Probabilities of Default Under the Counterfactual Scenarios

Entire population

	2024	2025	2026	2027
Baseline scenario	0.41%	0.41%	0.39%	0.38%
Geopolitical scenario	0.41%	0.42%	0.48%	0.53%
Recession scenario	0.41%	0.44%	0.57%	0.65%

Only LTV at origination < 90 percent

	2024	2025	2026	2027
Baseline	0.34%	0.33%	0.32%	0.32%
Geopolitical	0.34%	0.35%	0.39%	0.44%
Recession	0.34%	0.36%	0.46%	0.53%

Source: 2021 Household Finance and Consumption Survey and IMF staff estimates

Only DSTI at origination < 32 percent

	2024	2025	2026	2027
Baseline scenario	0.17%	0.17%	0.16%	0.16%
Geopolitical scenario	0.17%	0.18%	0.20%	0.22%
Recession scenario	0.17%	0.19%	0.23%	0.27%

Source: IMF Staff calculations.

63. The existing BBMs could be subject to leakages, although authorities' monitoring suggests such leakages are low at the moment. The BBMs apply only to loans to family-oriented SCIs intended to hold assets, while loans to professional SCIs are excluded (professional loans are subject to stricter lending standards).[28] Per authorities' monitoring, they do not see indications that professional SCIs are currently being used to circumvent the measures as the rate of creation of new firms has not increased significantly since the introductions of the BBMs. Another source of leakage

[28] SCIs are used both by residents and non-residents to invest in French properties, and while excluded from commercial activities (e.g. furnished rentals), they can be combined with an SARL (Société à Responsabilité Limitée) for this purpose.

could be that the BBMs apply only to housing loans not to other types of loans. However, renovation loans are generally included in housing loans at the time of purchase due to their favorable interest rates and tax incentives compared to consumer loans and therefore are covered by the DSTI limits. This also results in higher LTVs on housing loans. Consumer loans were about 14 percent of outstanding credit to individuals as of end-2024, and their growth rate picked up throughout the year. While the debt service on existing consumer loans is taken into account when computing DSTI for a housing loan, that on subsequent loans would not be. The application of DSTI limits to standalone consumer loans is hampered by the absence of a credit register in France. Past efforts to build such a register were struck down by courts.

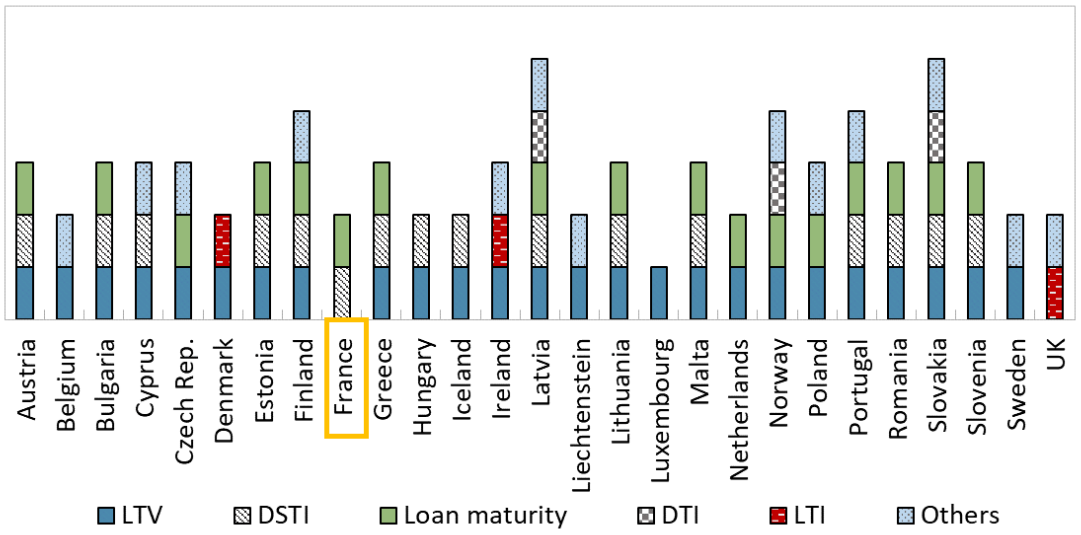
64. Structural features of housing loan market in France make it more resilient, but do not fully insulate it. Housing loans in France are predominantly fixed-rate (99 percent of new housing loans and 98 percent of the stock in 2024) insulating household balance sheets from interest rate risks. Lending standards are more focused on borrower's solvency and ability to pay (including stable employment and assets) than on collateral value. All housing loans in France are secured, either through a mortgage, an institutional guarantee or a personal guarantee. Importantly, roughly two-thirds of all home loans in France are guaranteed in the case of default, which mutualizes borrowers' and banks' risk at a large scale and reduces the cyclicality of the market. The three main guarantors, in charge of 84% of the guaranteed loans, are mutually or individually owned by the banks issuing the housing loans. In severe downturns, despite being well capitalized, these main guarantors could be subject to recapitalization needs by their banking parents. In total, 8 guarantors covering 98% of the guaranteed loans are subject to stress testing and appear resilient.

65. BBMs on housing loans should be broadened to prevent leakages, reflect best practices and avoid build-up of vulnerabilities as the housing market recovers. To prevent leakages, BBMs should, where possible, be broadened to renovation and other consumer loans. Although the DSTI limit at 35 percent is tight relative to peers and is supplemented by a maturity limit, lending standards within the 20 percent flexibility margin are unconstrained. Further this margin of flexibility is wider than European peers, where flexibility margins usually range between 5 to 15 percent. Most loans in the flexibility margin have DSTI (rather than maturity) above limit, and the analysis in Box 3 suggests that these are riskier borrowers. Some prudential requirements (e.g. higher DSTI limits or LTV limits for those SCIs for whom DSTI is not available) could be introduced to cover loans within the flexibility margin, or the margin narrowed. Further, authorities are encouraged to broaden regular monitoring of housing loans to cover credit volumes and lending standards to SCIs and continue to monitor potential leakages. From a macroprudential perspective, it is recommended to broaden BBMs before the boom phase of the housing cycle, to prevent vulnerabilities from rebuilding as the housing market recovers, which is consistent with the current objective of these measures to serve as guardrails.

66. High LTV loans warrant further monitoring. As discussed in ¶63, high LTV loans had higher default rates than low LTV loans during the recent period of price correction and nearly the same LGD, even though these loans are usually extended to higher income borrowers. Further, while the existing BBMs have led to a decline in the share of high LTV loans (those with LTV greater than

95 percent), this share remains high at 42 percent in December 2024. High LTV loans warrant careful additional monitoring as the cycle turns, and potential macroprudential action. An LTV limit will likely target a different borrower segment than the DSTI limit: in France, DSTI is highest for second or subsequent borrowers for a primary residence (who have lowest LTVs on average), while the highest LTVs are seen in buy-to-let investors (Figure 4). While borrowers that qualify for buy-to-let loans have higher income and show lower DTI on average, the average DTI ratio for this segment is still high at 3.6. Being wealthier, these investors also have access to additional leverage via special purpose vehicles or foreign entities and could face liquidity pressures during material downturns. The current BBMs do not include an LTV limit, despite this being present in nearly all other European countries with BBMs, many of whom also combine DSTI with maturity limits, and have full recourse lending (Figure 5). In France, however, risks to financial stability caused by the absence of LTV are mitigated by the small share of mortgage-backed loans compared to peer countries. A future shift in lending practices towards more collateral-based lending could in addition create new risks. Authorities should continue to monitor market dynamics and consider customized LTV limits, should they assess them to be appropriate.

Figure 5. Europe: Borrower-Based Measures on Residential-Real Estate Lending



Source: ESRB.

Note: The presence of each indicator (LTV, DSTI, Loan Maturity, DTI, LTI, Others) for the respective countries signifies that the corresponding measure has been implemented.

C. Corporate Sector Vulnerabilities and Tools

67. French non-financial corporates' indebtedness is high relative to peers. NFC debt is higher than the euro-area average and has increased via an increase in bank borrowing (Figure 6). Inter-company borrowing has grown as well. A fifth of the debt of publicly listed firms is issued by highly indebted corporates. SME defaults increased with the rise in interest rates and the end of

COVID-19 era moratoria (which had contained default rates in 2020), but credit to defaulting SMEs accounts for a small share of total bank lending.

68. The FSAP's analysis points to significant risks in NFC sector. Stress tests of publicly listed NFCs shows that corporate debt at risk would increase notably under the geopolitical and recession adverse scenarios, thus highlighting underlying vulnerabilities of the French NFC sector. [29] Under the bank solvency stress test scenarios, based on end-2023 data for publicly listed non-financial corporates, debt-at-risk (based on an ICR below one) would increase in the two adverse scenarios, to about 60 percent of total debt after two years and decline moderately thereafter. [30] Default probabilities, related to leverage and ability to cover interest expenses with income flows, would increase as a result. Under the two adverse macroeconomic scenarios, cash shortages would increase among publicly listed NFCs. A sensitivity analysis on non-publicly listed firms found similar vulnerabilities.

69. HCSF was proactive in identifying and taking macroprudential measures to address risks from the corporate sector. In line with HCSF's diagnosis of risk concentration among large corporates, banks' LE limits to highly indebted corporates were tightened in 2018. The French globally and domestic systemically important banks were required to set a five percent exposure limit (of Tier 1 capital) to highly indebted large corporations, effective July 1, 2018 (for two years, and extended annually until 2023). With the introduction of sectoral SyRB in CRD V in 2019, the LE limit was no longer compliant with pecking order. Further, the LE limit risked becoming more binding in the high-interest environment and encouraging substitution to market-based finance. The HCSF changed this limit effective August 2023 to a sectoral systemic risk buffer in the form of a CET1 capital surcharge of 3 percent for exposures above 5 percent of Tier 1 capital. Following the SSM definition, the definition of highly indebted corporates was changed to those with leverage ratio (total debt/EBITDA) of the consolidated firm strictly above 6 or negative. This was a de-facto broadening of the definition, as the share of large French firms and the consolidated total debt covered increased under the new definition, while the exposures previously targeted continued to be covered by the sSyRB.[31]

70. The sectoral systemic risk buffer was successful in reducing concentrated exposures and is set to be lifted. The sSyRB was calibrated to strike a balance between deterring banks from lending more to highly indebted companies, while avoiding procyclicality in a period of higher interest rates. The aggregate levels of additional CET1 requirements when the sSyRB entered into force was limited and additional requirements decreased since the implementation, as firms

[29] Based on the methodology of Ding and Tressel (2021).

[30] The Interest Coverage Ratio (ICR) is defined as earnings before interest and taxes over interest expenses.

[31] Materiality threshold was maintained identical as in the LE measure – the total amount of the final exposures of the "group of connected clients" at the highest level of consolidation, as defined in the CRR large exposures framework, should be greater than or equal to 5% of Tier 1 capital.

diversified their lender base. In June 2025, the HCSF lifted the SyRB, noting that the specific risks it was designed for have now diminished, and that its prudential buffer impact is now insignificant.

71. CRE sector has undergone a substantial correction since the pandemic, but risks to the financial system appear contained. Structural shifts affecting the sector, including rise in teleworking, and higher interest rates have meant large price declines, low transaction volumes and an increase in NPL rates for loans to the CRE sector. High leverage and debt secured by assets expose firms to refinancing risks, however, the short-term debt of CRE firms is limited (25 percent of total debt in 2023). Liquidity risks could arise from fund outflows, but 70% of real estate fund assets are in funds that are closed-ended in practice, and AMF urged real estate funds to reassess share valuations in mid-2023. However, France's five major banks have minimal CRE exposure (to real estate professionals), around 2.9% of total assets and 67% of CET1 capital in 2023, and exposures of insurers are also low relative to EU peers.[32]

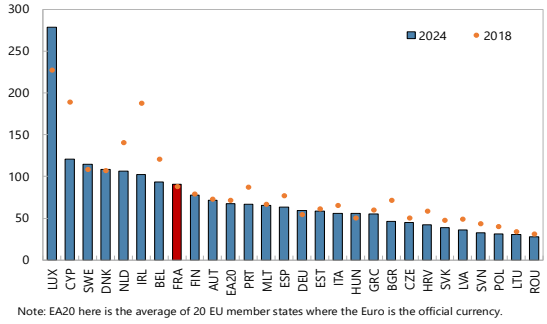
72. Authorities should continue to closely monitor the vulnerabilities in the non-financial corporate sectors and stand ready to raise the CCyB rate if warranted. If NFC vulnerabilities continue to worsen, a higher CCyB rate would provide releasable capital and protect credit in the event of a more severe adverse shock. This would recognize the risks in the non-financial corporate sector that reside beyond the highly indebted corporates, would not excessively penalize corporate lending by banks (relative to other borrowers) and would be consistent with authorities' current approach for setting the CCyB rate. Authorities could also consider a broader sectoral SyRB, to cover corporate exposures rather than only those to highly indebted corporates. This measure could be calibrated to differentiate across sectors (higher buffer for less resilient sectors) to penalize riskier exposures more heavily; or tiered to avoid cliff effects by gradually increasing the capital charge in line with growing firm indebtedness and bank exposure.

Figure 6. France: Non-Financial Corporate Sector Vulnerabilities

French corporate debt is high relative to peers....

Nonfinancial Corporation (NFC) Debt Outstanding

(Percent of GDP; Consolidated Debt)



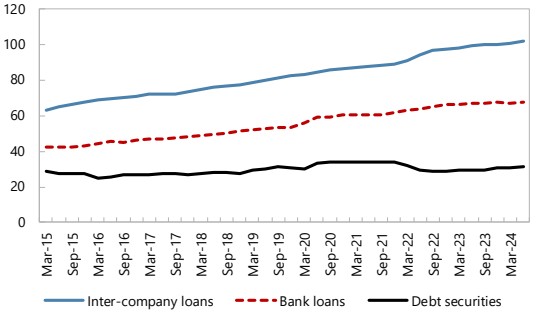
Note: EA20 here is the average of 20 EU member states where the Euro is the official currency.

Sources: ECB and IMF staff estimates.

...and has increased via bank and intercompany borrowing....

NFC debt by type

(Percent of GDP)



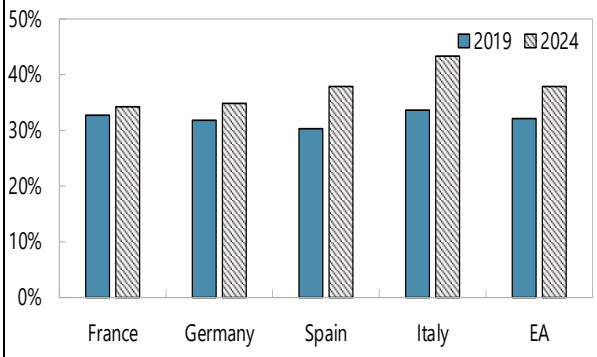
Source: Banque de France.

[32] When adding loans collateralized by CRE assets and loans to real estate and construction firms, the exposures amount to 6.6% of total assets. Banque de France Financial Stability Reports, June and December 2024.

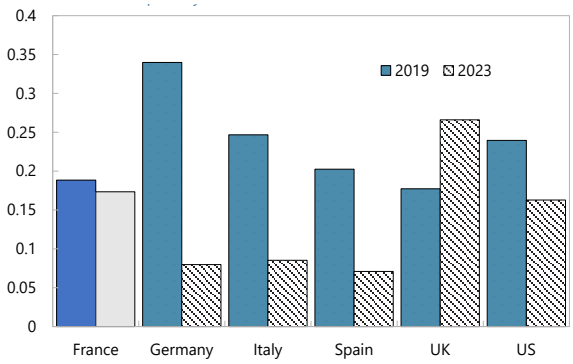
Figure 6. France: Non-Financial Corporate Sector Vulnerabilities (concluded)

...while cash buffers have grown slower than peers
Cash Holdings
(Percent of Consolidated Debt)

Source: ECB.

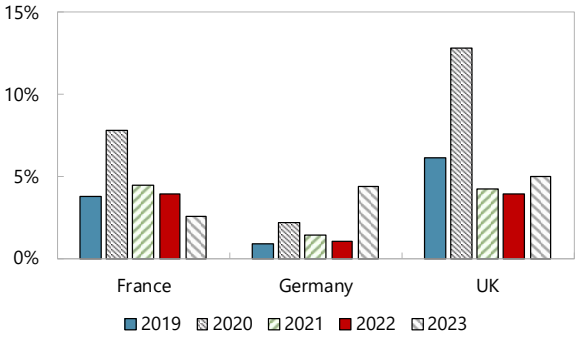


Highly indebted corporates account for a significant share of aggregate debt of publicly listed firms.
Debt of Publicly Listed Firms with Debt-to-EBITDA >6 OR <0 (Share of Debt of All Publicly Listed Firms)



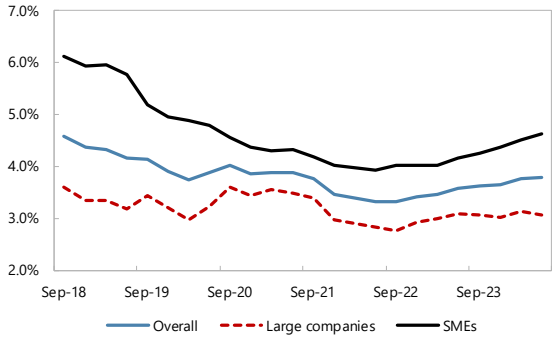
Sources: DataStream and IMF Staff calculations.

A narrower measure of debt at risk has declined...
Debt Owned by Listed Firms with an ICR<2.
(Percent of GDP)



Source: Banque de France.

...even as SME non-performing loans have increased, with the end of the COVID-19 era moratoria.
Non-Financial Corporate NPL Ratio
(Percent of Total NFC Loans)



Note: FINREP data at high level of consolidation.

Source: Banque de France.

D. Bank Funding and Liquidity Vulnerabilities

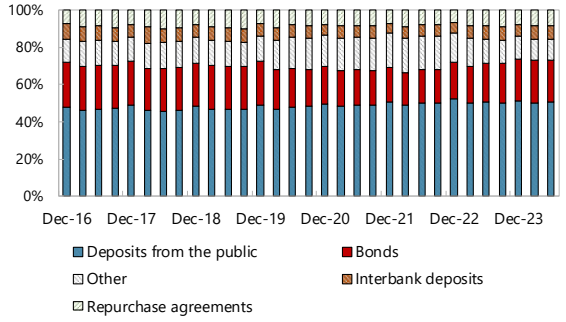
73. French banks' funding structure has a significant share of market funding, but concentration of funding remains small (Figure 7). Deposits from the public are about half the funding base, and retail deposits are about 40 percent of available stable funding, which is lower than EU average. As detailed in the TN on Systemic Risk Analysis, funding appears well diversified, and concentration of funding remains small. The aggregate Net Stable Funding Ratio (NFSR) stands at 115 percent and exceeds the 100 percent requirement for all banks, ensuring stable funding for longer-term assets. While aggregate LCRs in all currencies and in euros have remained stable at around 150 percent every month since 2020 and USD LCRs are all above 100 percent at the end of 2024, a significant volatility of LCRs in USD is observed at a monthly frequency, and aggregate USD

LCRs were below 100 percent some months in 2021-2022. Several banks have large USD funding, and this appears to be shorter-term and more volatile than overall funding. Cash flow stress tests reveal that banks can withstand significant liquidity outflows under several scenarios.

Figure 7. France: Bank Funding and Liquidity

Market funding constitutes a significant share of bank funding….

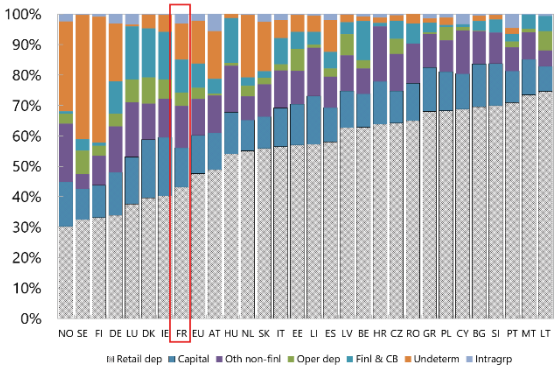
Funding Structure of the Banking Sector
(Percent)



Source: Banque de France.

…and the share of retail deposits is lower than peers.

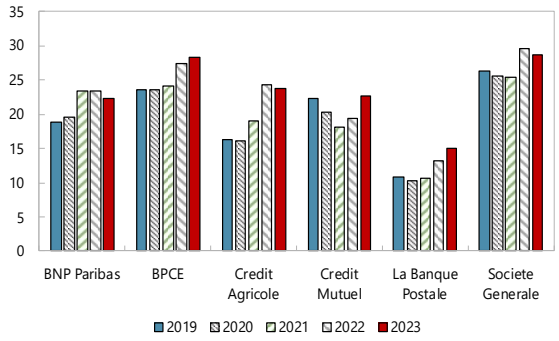
EU - Composition of Available Stable Funding
(Percent of Total Available Stable Funding, 2023 Q4)



Source: EBA.

Wholesale funding share of major banks has increased.

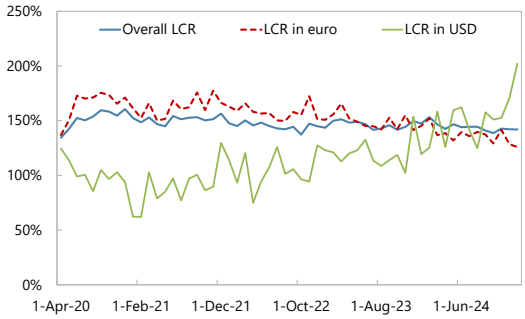
Wholesale Funding Share
(Percent of Total Funding & Capital)



Source: Fitch.

Overall LCR remains above 100%, and LCR in USD has improved but remains volatile.

Evolutions of LCRs, Weighted Average
(In Percent)



Source: COREP and IMF staff estimates.

E. Vulnerabilities in the NBFI Sector and Tools

74. French investment fund sector has grown over time (Figure 8). As detailed in the TN on Supervision of Liquidity Risk in Investment Funds and the Oversight of Trading Activities, the EUR 2 trillion investment fund sector in France caters to the domestic and EU market with a range of funds across different asset classes, including real estate and alternative investment funds. These funds support a large fixed-income market and one of the largest money-market fund (MMF) markets in

Europe (broadly stable around EUR 475 billion since April 2024, per information provided by the AMF). The investment fund industry is supervised by the AMF.[33]

75. The AMF has been proactive in encouraging the adoption of LMTs and should continue to closely monitor and tighten requirements if risks accumulate. While the main aim of liquidity management tools (LMTs) is to reduce liquidity risk for individual funds and ensure evenhanded treatment of unitholders in periods of stress, they also contribute to financial stability by limiting destabilizing spirals due to market liquidity shocks. The AMF proactively incentivized the introduction of LMTs in French funds' toolkit and focused its work in particular on funds with more illiquid assets, ahead of the obligations imposed by the review of the UCITS and AIFM Directives (Darpeix and others, 2024).[34] In particular, the AMF introduced several incentivization measures in 2022 and 2023. It also conducted proactive thematic supervision of valuation practices for real estate funds in 2021 and 2022, focusing on valuation adjustments and the correct use of Liquidity Management Tools (LMT). This data-driven approach revealed some poor practices, prompting three letters to the market that stressed the importance of proper valuation and LMT usage to safeguard investor interests. Discussions were held with the HCSF to ensure that liquidity issues did not create systemic risks. An estimated 66 percent of retail opened-ended collective investment scheme AUM were equipped with gates and 45 percent with swing pricing as of end-2023.[35] The adoption in MMFs is understood to be significantly lower, whereas the adoption of gates in open-ended retail private equity and real estate funds is understood to be significantly higher, approaching 100 percent.

76. Investment fund liquidity stress tests suggest that investment funds in the sample have sufficient liquidity to withstand the redemption shock. As described in the TN on Systemic Risk Analysis based on a stringent definition of liquid assets (only assets that would incur up to 85 percent haircut under the banking sector HQLA definition are considered liquid assets), investment fund liquidity stress testing results suggest only 30 funds have liquidity coverage ratio below 1 under the adverse scenario, with a collective liquidity shortfall of EUR 1 billion, regardless of pro-rata or waterfall liquidation strategies. The AMF has conducted several ad hoc studies on the relationship between performance and outflows, which did not point to fire sale-like behaviors. However, AMF does not have systematic access to holdings data (in particular, securities identification) which reside with other supervisory bodies (ACPR, BdF).

77. The AMF conducts regular assessments of leverage in AIFs and has not applied leverage limits under the Article 25 of AIFMD. Under article 25 of the AIFMD and following ESMA guidelines, the AMF conducts quarterly assessments of the potential systemic risks posted by leverage of an AIF or a group of AIFs. If needed, the AMF can impose additional leverage limits.

[33] Markets in Financial Instruments Directive (MiFiD) investment firms can only manage funds by delegation and are under joint AMF/ACPR supervision.

[34] The March 2024 review of the AIFM/UCITS Directives (Directive (EU) 2024/927) requires all UCITS and all open-ended AIFs to have two LMTs by April 2026 (one for money market funds).

[35] TN on Supervision of Liquidity Risk in Investment Funds and the Oversight of Trading Activities.

Additionally, when risks are detected by other authorities (for example, real estate funds in Ireland or liability-driven investment (LDI) funds in Ireland and Luxembourg), a special assessment is run on the funds under the AMF remit to ensure similar risks are not present in French funds.[36] So far, the AMF has not identified any funds or group of funds using levels of leverage likely to have an impact on financial stability and has therefore not imposed additional leverage limits. The absence of the use of additional leverage limits reflects the proactive vigilance of AMF. The AMF takes an ex-ante approach to impose limits in fund authorization, with limits prescribed for certain AIFs through Article R214-36-1 of the Monetary and Financial Code. For example, retail open-ended real estate funds cannot borrow more than 40% of their net asset value.

78. Private credit and the financing of corporate borrowing through NBFIs only plays a limited role at present, although authorities should continue to monitor this growing asset class. Banks continue to dominate credit origination in France, with private credit largely appearing in conjunction with private equity-financed deals. Significant Risk Transfers (SRTs) are increasingly being used by French banks to generate capital relief, supported by regulatory development, and in many ways mimic the bank/NBFI partnerships in private credit that have become common in the US.[37] As SRTs function as a partial synthetic securitization, this may be providing an alternate path forward in the absence of the development of a more robust European securitization market. However, SRTs are creating new interdependencies between banks and NBFIs and may also be increasing model risk for banks.

[36] The analysis conducted by AMF in November 2022 on the activation of article 25 by central Bank of Ireland (for real estate funds) concluded that similar risk factors were not present in funds supervised by the AMF. Further, on the LDI funds, only 2 LDI-type funds were managed by French AIFM and had only one investor, through a dedicated fund.

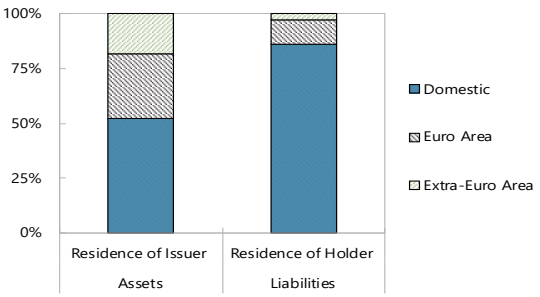
[37] Banks can claim capital relief by transferring credit risk to third parties under the Capital Requirements Regulation (CRR). A 2017 EBA paper and subsequent recommendations clarified the supervisory process for significant risk transfer (SRT), while the 2019 EU Securitization Regulation introduced a simple, transparent, and standardized (STS) regime, allowing cheaper funding and lower capital requirements. In 2021, the STS regime was extended to synthetic SRT transactions, benefiting the market. See González and Triandafil (2023). The ECB has developed a fast-track process for the supervisory assessment of SRT and is testing it in the first half of 2025.

Figure 8. France: Investment Funds Industry Structure

French investment and money market funds are largely domestically held.

Assets and Liabilities of Investment Funds and Money Market Funds

(Percent of Total)

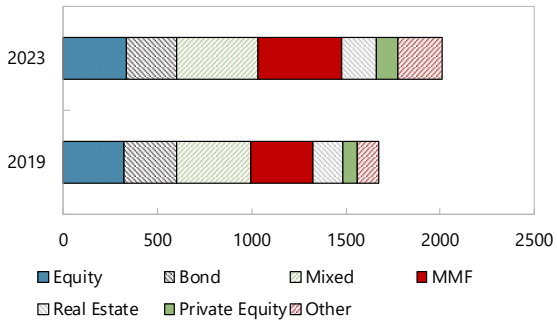


Source: Banque de France and ECB.

Investment fund sector has grown over time.

NAV of the Investment Fund Sector

(In EUR Billions)



Source: AMF annual reports and AIFM for real estate funds.

References

Autorité de contrôle prudentiel et de résolution (2024). Climate stress-test: The ACPR encourages insurers to keep up their efforts towards the integration of climate risk, *Press release*, May 23, 2024. https://acpr.banque-france.fr/en/press-release/climate-stress-test-acpr-encourages-insurers-keep-their-efforts-towards-integration-climate-risk

Avouyi-Dovi, S., Labonne, C. & Lecat, R. (2014). The housing market: the impact of macroprudential measures in France. *Banque de France Financial Stability Review*, No. 18, April 2014

Banque de France. (2024). *Financial stability report – December 2024*. https://www.banque-france.fr/en/publications-and-statistics/publications/financial-stability-report-december-2024

Benhami, K., Demartini, A. & Schwager, L. (2021). Retrospective analysis of the impact of liquidity contracts on the French market (December 2019 - May 2020) and potential changes in accepted market practice. *AMF paper*, April 2021. 33p
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4889914

Benhami, K., Le Moign, C., Salakhova, D. & Vinel, A. (2018). Les interconnexions entre le secteur de la gestion d'actifs français et le reste du système financier français. *HCSF paper*. https://www.economie.gouv.fr/files/files/directions_services/hcsf/HCSF_20180611_-_5-2-1_Projet_de_publication_interconnexions_FR_vu_AMF_remerciements.pdf?v=1662021603

Benhami, K., Veldhuijzen L.v. & Schoolderman T. (2022). Short selling ban impact – a comparison of the French and the Dutch markets. AMF and AFM paper, February 2022. https://www.amf-france.org/sites/institutionnel/files/private/2022-02/afm-amf-ssb-impact_publication_0_2.pdf

Borraccia, G., Espinoza, R., Guzzo, V., Jiang, F., Lafarguette, R., Nguyen, V., Segoviano, M., & Wingender, P. (2023). Financial Conditions in Europe: Dynamics, Drivers, and Macroeconomic Implications. *IMF Working Paper* No. 2023/209, September 2023.

Bowe, C. (2022). Building trust in macroprudential policy. *Speech by Colette Bowe*, Bank of England, November 2, 2022. https://www.bankofengland.co.uk/speech/2022/november/colette-bowe-speaker-at-the-university-of-birmingham-business-school

Caldera Sánchez, A. & Johansson, Å. (2013). The price responsiveness of housing supply in OECD countries. *Journal of Housing Economics,* 22(3), 231–249. https://doi.org/10.1016/j.jhe.2013.05.002

Camara, B., Castellani, F.-D., Fraisse, H., Frey, L., Héam, J.-C., Labonne, C. & Martin, V. (2015). MERCURE: A macroprudential stress testing model developed at the ACPR. Autorité de contrôle prudentiel et de résolution, *Débats économiques et financiers No. 19*. https://acpr.banque-france.fr/system/files/import/acpr/medias/documents/20151012-def-mercure_0.pdf

Chrétien É., Darpeix P., Gallet, S., Grillet-Aubert, L., Lalanne, G., Malessan, A., Novakovic, M., Salakhova, D., Samegni-Kepgnou B. & Vansteenberghe É. (2020). Exposures through common

portfolio and contagion via bilateral cross-holdings among funds, banks and insurance companies. *HCSF paper*. 20200616_Interconnexions_Exposures_through_common_portfolio.pdf

Couaillier, C. & Henricot, D. (2023). How do markets react to tighter bank capital requirements? *Journal of Banking and Finance*, vol. 151, June 2023, 106832. https://www.sciencedirect.com/science/article/abs/pii/S0378426623000572

Couaillier, C. & Scalone, V. (2022). Risk-to-buffer: Setting cyclical and structural capital buffers through banks stress tests. *European Central Bank Working Paper Series* No. 2966. https://www.ecb.europa.eu/press/conferences/shared/pdf/20220929_wg_stress_testing/Scalone_Publication.en.pdf

Cumming, F. & Hubert, P. (2023). The Distribution of Households' Indebtedness and the Transmission of Monetary Policy, *The Review of Economics and Statistics*, MIT Press, vol. 105(5), pages 1304-1313, September.

Darpeix, P., Le Moign, C., Même, N. & Novakovic, M. (2020). Overview and Inventory of French Funds' Liquidity Management Tools. *AMF working paper*, July 2020.

Darpeix, P., Même, N., Mosson, N. & Novakovic, M. (2021). Overview and inventory of French funds' liquidity management tools: Dynamic view since 2017 and update as at mid-2021. *AMF working paper*, November 2021.

Darpeix, P. Rosspopoff, B. & Scauflaire, J. (2024). Monitoring of the adoption of liquidity management tools by French funds. *AMF working paper*, November 2024. monitoring-of-the-adoption-of-liquidity-management-tools-by-french-funds.pdf

DeNederlandsche Bank (2022). Analytical framework for setting the Countercyclical Capital Buffer in the Netherlands. DNB February 2022.

Ding, X. and Tressel, T. (2021). Global Corporate Stress Tests—Impact of the COVID-19 Pandemic and Policy Responses. IMF Working Paper No. 2021/212, August 2021.

Espic, A., Kerdelhué, L. & Matheron, J. (2024). Capital requirements in light of monetary tightening. *Banque de France Working Paper* No. 947. https://www.banque-france.fr/en/publications-and-statistics/publications/capital-requirements-light-monetary-tightening

European Central Bank (2015). *Financial Stability Review – November 2015*. European Central Bank. Financial Stability Review, November 2015

Fourel, V. & Schwenninger, A. (2024). The impact of the PEPP on the corporate commercial paper market. *Banque de France Working Paper Series* No. 946. https://www.banque-france.fr/en/publications-and-statistics/publications/impact-pepp-corporate-commercial-paper-market

González, F. & Triandafil, C.M. (2023). The European Significant Risk Transfer Securitisation Market *ESRB: Occasional Paper Series* 2023/23, October 2023. Available at SSRN: https://ssrn.com/abstract=4590507 or http://dx.doi.org/10.2139/ssrn.4590507

Gross, M., Tressel, T., Ding, X. & Tereanu, E. (2022). What drives mortgage default risk in Europe and the US? *IMF Working Paper* No. WP/22/65, April 2022.

HCSF (2014). Strategy of the Haut Conseil de stabilité financière. https://www.economie.gouv.fr/files/strategy_hcsf.pdf

International Monetary Fund (2013). Key Aspects of Macroprudential Policy; *IMF Policy Paper*, June 10, 2013.

International Monetary Fund (2014a). Staff Guidance Note on Macroprudential Policy. *IMF Policy Paper*, November 2014. https://www.imf.org/external/np/pp/eng/2014/110614.pdf

International Monetary Fund (2014b). Staff Guidance Note on Macroprudential Policy - Detailed Guidance on Instruments. *IMF Policy Paper*, December 2014. https://www.imf.org/external/np/pp/eng/2014/110614.pdf

Tereanu, E., Behn, M., Lang, J.H. & Duca, M.L. (2022). The transmission and effectiveness of macroprudential policies for residential real estate. *European Central Bank, Macroprudential Bulletin, Issue 19, October 2022.* https://www.ecb.europa.eu/press/financial-stability-publications/macroprudential-bulletin/html/ecb.mpbu202210_3~b569204afa.en.html

Le Moign, C. & Benhami, K. (2021). Effect of speed bumps: analysis of the impact of the implementation of EUREX's Passive Liquidity Protection on French equity options. Autorité des marchés financiers, July 2021.

Leitner, G., Dvořák, M., Giammaria, A. & Zsámboki, B. (2023). How Usable are Capital Buffers? *ECB Occasional Paper* No. 329, September, 2023. https://www.ecb.europa.eu/pub/pdf/scpops/ecb.op329~60b6f9aa26.en.pdf

Mathur, A., Naylor, M. & Rajan, J. (2023). Creditable capital: macroprudential regulation and bank lending in stress. *Bank of England Staff Working Paper* No. 1011, December 2023.

Miettinen, P. & Nier, E. (forthcoming). Rethinking Macroprudential Capital Buffers. International Monetary Fund.

Nouail, C. (2024). Bond Transparency: How to Calibrate Publication Deferrals? *AMF study*, July 2024.

Sydow, M., Schilte, A., Covi, G., Deipenbrock, M., Del Vecchio, L., Fiedor, P., Fukker, G., Gehrend, M., Gourdel, R., Grassi, A., Hilberg, B., Kaijser, M., Kaoudis, G., Mingarelli, L., Montagna, M., Piquard, T., Salakhova, D. & Tente, N. (2024). Shock amplification in an interconnected financial system of banks

and investment funds. *Journal of Financial Stability, 71*, 101234. https://doi.org/10.1016/j.jfs.2024.101234

van Bekkum, S., Gabarro, M., Irani, R. M. & Peydró, J.-L. (2024). The real effects of borrower-based macroprudential policy: Evidence from administrative household-level data. *Journal of Monetary Economics, 147*, 103574. https://doi.org/10.1016/j.jmoneco.2024.103574

Warisse, C. (2017). Analysis of the developments in residential property prices: Is the Belgian market overvalued? *Economic Review, National Bank of Belgium, 61–77, June 2017*. https://www.nbb.be/en/articles/analysis-developments-residential-property-prices-belgian-market-overvalued

Annex I. Additional Information

Annex I. Table 1. France: Implementation Status of 2019 FSAP Macroprudential Policy Recommendations

Recommendations	Agency	Implementation Status
Expand the role of external members, including greater involvement at an earlier stage of the HCSF decision process.	HCSF	Partly addressed. "Atelier Personnalités Qualifiées" are being held prior to HCSF meetings
Consider publication of summary of meetings including the policy proposals discussed.	HCSF	Partly addressed. While summary of meetings are published, these do not contain a summary of all policy proposals discussed particularly those that were proposed by the Governor but voted down.
Empower the HCSF to make recommendations to member institutions on tools entrusted to them (O-SII buffer, Articles 124 and 164 CRR for ACPR; leverage limits for AMF), with a 'comply or explain' mechanism.	HCSF	No action
Report intra group exposures and transactions within conglomerates on a flow and stock basis, at quarterly frequency. Develop guidance to address direct and indirect, and common exposures of entities in the conglomerate.	ACPR, AMF	Addressed. Conglomerates report on intragroup exposures and transactions within conglomerates on a flow and stock basis at regular frequency, i.e. semi-annual basis for the most significant conglomerates. An enhanced reporting has been developed by the European Joint Committee in Financial Conglomerate and was formally adopted by the European Commission in December 2022.
Introduce liquidity management requirements and liquidity stress tests at the conglomerate level	HCSF, ACPR, ECB	Addressed. The FICOD, article 9 as transposed in France requires to implement adequate risk management, including liquidity risk. SSM further clarified its expectation on liquidity monitoring and management through the adoptions of a dedicated annex to SREP methodology in 2020 procedure. ACPR is carrying out ad hoc research projects on liquidity analysis and the conduct of stress testing at the conglomerate level, recently presented to the ACPR Scientific Committee.

Annex I. Table 1. France: Implementation Status of 2019 FSAP Macroprudential Policy Recommendations (concluded)

Recommendations	Agency	Implementation Status
Develop capacity for macro stress test of investment funds.	AMF	Addressed. Macro stress-tests of investment funds are conducted by the ECB; A system wide liquidity stress testing exercise is being conducted by French authorities.
Add to the HCSF dashboard indicators on investment funds (assets under management, leverage, liquidity and returns).	HCSF, AMF	Addressed. HCSF regularly monitors a wide range of indicators with sctoral coverage spanning banks, households, corporates, real estate, NBFIs and financial markets, and also covering interconnectedness, concentration and climate risks.
Develop analytical framework for borrower-based measures for corporates. Consider sectoral SRB (Systemic Risk Buffer) if risks intensify.	HCSF	Addressed. On July 28th, 2023, the French macroprudential authority introduced a sectoral systemic risk buffer of 3 percent on the exposures of French banks to large, heavily-indebted corporates.
Evaluate options to further incentivize corporates to finance through equity rather than debt.	HCSF, MoF	No action.
Actively engage with the ESRB and others for a speedy development of liquidity and leverage related tools for insurers and investment funds.	HCSF, BdF, ACPR, AMF	Addressed. The revision of the AIFM Directive will strengthen the rules on liquidity management for open-ended funds. The AMF recently published a position paper on developing a macroprudential approach for investment funds.

Annex I. Table 2. France: Key Indicators Used in Systemic Risk Monitoring

Types of Indicators	Notes
Broad-based credit risks or to achieve resilience to a broad range of shocks	
1. Basel gap 2. Bank credit to GDP gap 3. Nationally preferred measure of credit-to-GDP gap ("HCSF" gap with consolidated debt on the numerator) 4. Credit-to-GDP gap with credit net of liquid assets ("HCSF" gap net of liquid assets) 5. Financial cycle indicator 6. Composite Index of Systemic Stress (CISS)	edit gaps are associated with a recommended countercyclical capital buffer following the buffer guide defined in the ESRB/2014/1. While non-binding, this rule maps a level of buffer to the observed credit gap to help the HCSF assess the optimal buffer level. e financial cycle indicator aggregates eight series from the household and NFC sectors. It acts as an early warning signal to complement credit-to-GDP gaps for decisions to build up the countercyclical capital buffer. The Composite Index of Systemic Stress helps to gauge potential opportunities for releasing the counter cyclical buffer.
Systemic Liquidity Risks in the banking sector	
1. Structure of French banks' liabilities 2. French banks' non-core liability ratio (% of customers' deposits) 3. Regulatory ratios (LCR, NSFR) 4. Asset encumbrance ratios 5. Loan-to-deposits ratios (global, NFCs, households) 6. Counterbalancing capacity 7. Funding concentration risks (Top 10, wholesale, short-term, long-term, central bank funding) These indicators are regularly monitored by the ACPR department as well as ECB and EBA working groups	LCR and NSFR regulatory thresholds at 100%. Most of these ratios are used in a framework for analyzing banking sector vulnerabilities. This system is based on a historical and comparative analysis of the aggregate ratios of French banking groups compared with a group of euro zone peers. - Low vulnerabilities: < Median - Moderate vulnerabilities: > Median / <= 70th percentile - High vulnerabilities: >70th and =<90th percentiles - Severe vulnerabilities: > 90th percentile
Risks in the Household Sector	
1. Households' total debt-to-GDP ratio (%) 2. Household credit-to-GDP gap – deviation from trend (pp) 3. Total credit to households (total, housing loans and consumer loans) - annual growth rate (%) 4. Households' debt-service ratio (DSR) – level and quarterly change (pp) 5. Households' borrowing rates for new housing loans – rate (%)	- Variables are standardized via z-scores, which are then mapped to a level of vulnerability based on historical distributions - High vulnerabilities: >70th and =<90th percentiles of the historical distribution - Severe vulnerabilities: > 90th percentile of the historical distribution Deteriorating lending standards (increase in the share of new loans with high DSTI/LTV and/or maturity), and rising household debt ratios were the leading indicators leading to the implementation of the French borrower-based measures in 2019.

Annex I. Table 2. France: Key Indicators Used in Systemic Risk Monitoring (continued)

Types of Indicators	Notes
Risks in the Household Sector	
6. Lending standards of new housing loans– *mean values* of DSTI (%), LTV (%) and maturity at origination (years); *share of loans with high* DSTI/LTV and/or maturity at origination (%) 7. House price index for residential real estate (nominal and real) – annual growth rate (%) 8. House price-to-households' revenues ratio 9. Model-based house price overvaluation indicators –deviations from estimated fundamental values (%) 10. Building permits (total authorized floor area) – deviation from trend (%) 11. Households' total debt-to-GDP ratio (%) 12. Household credit-to-GDP gap – deviation from trend (pp) 13. Total credit to households (total, housing loans and consumer loans) - annual growth rate (%) 14. Households' debt-service ratio (DSR) – level and quarterly change (pp) 15. Households' borrowing rates for new housing loans – rate (%) 16. Lending standards of new housing loans– *mean values* of DSTI (%), LTV (%) and maturity at origination (years); *share of loans with high* DSTI/LTV and/or maturity at origination (%) 17. House price index for residential real estate (nominal and real) – annual growth rate (%) 18. House price-to-households' revenues ratio	

Annex I. Table 2. France: Key Indicators Used in Systemic Risk Monitoring (continued)

Types of Indicators	Notes
Risks in the Household Sector	
19. Model-based house price overvaluation indicators –deviations from estimated fundamental values (%) 20. Building permits (total authorized floor area) – deviation from trend (%)	
Risks in the Corporate Sector	
1. NFCs' total consolidated debt-to-GDP ratio (%) 2. NFC credit-to-GDP gap – deviation from trend (pp) 3. Total credit to NFCs (banking loans and debt securities) - annual growth rate (%) 4. NFCs' debt-service ratio (DSR) – level and quarterly change (pp) 5. NFCs' borrowing rates for banking loans – rate (%) 6. Surveys regarding credit constraints for NFCs (Bank Lending Survey and Survey on the Access to Finance of Enterprises)- (%) 7. Net debt (Gross debt – liquid assets)/ GDP (%) 8. Debt securities issuance (euros) 9. Transactions flows by non-residents of debt securities issued by non-financial corporations 10. NFC aggregate leverage ratio (%), computed from sectoral accounts 11. Interest Coverage Ratio (%) 12. Net interest flows (Payable – receivable interest rates)/EBE (%) 13. Share of loans with a residual or initial maturity of less than one year in the total outstanding amount (%) 14. Weight of credit to failing companies in the outstanding amount (%)	Answers to surveys (banks' answers for Bank lending Survey, BLS, and NFCs' answers for the Survey on the Access to Finance of Enterprises, SAFE) regarding credit conditions are used to gauge potential opportunities for releasing the counter cyclical buffer. If a bank's exposure to an NFC exceeds the thresholds concerning gross debt/EBITDA and group of connected clients, the sectoral SyRB applies. Gross debt/EBITDA and concentration of banks' exposures to large non-financial corporations are subject to an alert threshold: ▪ Gross debt/EBITDA > 6 or < 0 ▪ a group of connected clients higher than the threshold of 5% of the Tier 1 capital for a systemic French bank. These indicators are reported by banks and monitored above a lower threshold: ▪ Gross debt/EBITDA >= 4 or < 0 ▪ a group of connected clients higher or equal to the threshold of 4 % of the Tier 1 capital for a systemic French bank.

Annex I. Table 2. France: Key Indicators Used in Systemic Risk Monitoring (continued)

Types of Indicators	Notes
Risks in the Corporate Sector	
15. R-G : interest rate - Gross operating surplus annual growth (percentage point) 16. Indebtedness (total and for large firms): gross debt/EBITDA (%) 17. Concentration of banks' exposures to a selection of large non-financial corporations measured via the share of the final exposure in percentage of Tier One Capital (%)	
Foreign Currency Exposure Risks	
1. Liquidity ratios (LCR, NSFR) in main currency (USD notably)	Liquidity ratios in foreign currencies are not subject to regulatory requirements. However, the level of these ratios compared to 100% and the amplitude of quarter-on-quarter variations are monitored.
Asset Price Risks	
1. Price index for commercial real estate (nominal) – annual growth rate (%) 2. French stock market index (CAC40) valuation indicators (CAPE ratio) 3. High yield vs investment grade corporate bond spread (pp) 4. Credit Default Swap premia (CDS) for French publicly traded companies (bps) 5. Commodity prices volatility 6. EUR/USD risk reversal 7. 10-year sovereign yields (%) 8. Marginal Expected Shortfall for French banks (%) 9. SRISK for French banks (in billions of euros or % of total current market capitalization) 10. Distance-to-Default for French banks (% of total current market capitalization) 11. Real estate fund valuations 12. MMF valuations	For indicators 1 to 6, variables are standardized via z-scores, which are then mapped to a level of vulnerability based on historical distributions

Annex I. Table 2. France: Key Indicators Used in Systemic Risk Monitoring (continued)

Types of Indicators	Notes
Systemic liquidity risk and fire sale risk in the nonbank financial sector	
1. Asset-liability liquidity mismatch in AIFs 2. Leverage in AIFs	
Risks Associated with Capital Flows	
1. None	
Risks from systemically Important Institutions and interconnectedness within the financial system	
1. Concentration risk 2. Size and substitutability (total exposures, total deposits, total credits, payments transactions 3. Interconnectedness (intra financial sector assets and liabilities) 4. Complexity (derivatives notional, cross-border assets and liabilities)	Sectoral systemic risk buffer for exposure towards highly leveraged corporate above the threshold (5% of CET 1) Relative scores (market shares) are calculated and monitored for the annual assessment of systemic banks (at global and domestic levels)
Other Risks	
1. French banks' CET1 ratio (%) 2. French banks' profitability, Return-on-Assets (%) 3. French banks' average portfolio risk weights (%) 4. French banks' nonperforming loans (%) 5. French banks' management buffer (%) 6. Transaction volume of commercial real estate 7. Vacancy rate and absorption rate of commercial real estate (%) 8. Rents of commercial real estate 9. Yield and spread over 10-year government bond of commercial real estate 10. Authorized and started construction volume 11. Share price and price-to-book of real estate investment trusts 12. Credit ratings of real estate and construction firms 13. French banks' exposure to real estate and construction firms	Most of the banking ratios are used in a framework for analyzing banking sector vulnerabilities. This system is based on a historical and comparative analysis of the aggregate ratios of French banking groups compared with a group of euro zone peers. - Low vulnerabilities : < Median - Moderate vulnerabilities: > Median / <= 70th percentile - High vulnerabilities: >70th and =<90th percentiles - Severe vulnerabilities: > 90th percentile

Annex I. Table 2. France: Key Indicators Used in Systemic Risk Monitoring (continued)

Types of Indicators	Notes
Other Risks	
14. French bank loans guaranteed by commercial real estate 15. Non-performing loans to real estate and construction firms 16. Insurances' exposure to commercial real estate 17. Assets under management of real estate investment funds 18. Debt of real estate investment funds 19. Net inflow to real estate investment funds 20. Liquidity and concentration of real estate investment funds' portfolio 21. Non-specialized investment funds' exposure to real estate and construction firms Climate risks for financial institutions: 22. Exposure to climate policy relevant sectors (CPRS) 23. Exposure to sectors with high transition risk (TEC, Alessi and Battiston, 2023) 24. Share of investment in fossil fuels (Urgewald database) 25. Analytical indicators of carbon emissions from the portfolios of financial institutions (Financed emissions, WACI and carbon footprint; see here) 26. Digital Twin - Estimation of banks' exposure to the impact of flooding on companies' physical assets 27. Risk score (RS), Potential Exposure at Risk (PEAR), Normalized Exposure at Risk (NEAR) and Collateral-Adjusted Exposure at Risk (CEAR) - see here 28. Physical Solvency Capital Requirement (SCR) - Proportion of the balance sheet of insurers exposed to climatic risks	

Annex I. Table 2. France: Key Indicators Used in Systemic Risk Monitoring (concluded)

Types of Indicators	Notes
Other Risks	
29. Alignment and eligibility with the European Taxonomy (TAC/TEL, Alessi and Battiston, 2023) 30. Share of investment in green bonds 31. Share of funds with a 'green' label among mutual funds held by French insurers 32. Greenium estimation for corporate and sovereign green bonds in EA	

Annex I. Table 3. France: Current Setting of Macroprudential Tools in France

Instrument	Current calibration
Broad-Based Tools Applied to the Banking Sector	
Countercyclical capital buffer/requirement	As announced on December 13, 2022, and effective January 2, 2024, the CCyB rate is 1%.
Capital conservation buffer (art. 129 CRD)	The prevailing framework is the same as the one defined in the CRD. The capital conservation buffer consisting of CET1 capital is 2.5% since January 1, 2019.
Limits on Leverage ratio	As announced on May 14, 2019, and effective June 28, 2021, credit institutions are subject to a leverage ratio of 3% at the EU level. The leverage ratio includes central bank exposures. A GSIB leverage buffer was implemented in 2023 (reaching 50% of the GSIB risk-based buffer). The leverage requirements framework was also extended with Pillar 2 Requirements and Pillar 2 Guidance, implemented in 2024.
Household Sector tools	
Household sector specific capital requirement	Under Basel rules, a 10% floor for loss given defaults (LGDs) on retail exposures secured by an immovable property (CRR art. 164.4) applies.
Cap on debt-service-to-income ratio	Effective December 18, 2023, Debt Service-to-Income (DSTI) ratio cap of 35% and a loan maturity limit of 25 years apply. These rules include a flexibility margin of 20% of volume issuance, allowing a portion of new loans to exceed either the DSTI or the maturity limits. Within this 20% margin: - 30% of the total margin specifically reserved for first-time buyers only; - 70% reserved to loans for primary residences (including first-time buyers) Credit institutions can exclude interest payments on bridge loans from the DSTI calculation, provided the bridge loan's loan-to-value (LTV) ratio does not exceed 80%.
Limit on amortization periods	25-year maturity cap comes with a possibility to consider compliant specific operations with a maturity up to 27 years. Those include new constructions or operations with heavy renovation work (10% of the total project cost), requiring a delay between acquisition and entry into the house.
Exposure caps on household credit – loans with high DSTI ratio	Effective 1 July 2023: Loans with a DSTI ratio over 35% (or non-compliant maturity) cannot exceed 20% of new volume issuance. At least 70% of the flexibility margin is reserved for primary residences and at least 30% for first-time home buyers.
Corporate Sector tools	
Corporate sector capital requirement (art. 133, 134 CRD)	Since August 1, 2023, a sectoral systemic risk buffer of 3% is imposed on large exposures of French systemically important banks to large, heavily indebted companies. The buffer rate applies to domestic risk-weighted exposures to non-financial corporates with a total debt to EBITDA ratio greater than six or negative. The measure only applies if the exposure is part of a group of connected clients at the highest level of consolidation representing more than 5% of Tier 1 capital. For more references on the design of the measure, see the ESRB notification or the HCSF note. As announced on June 2, 2025 and effective June 18, 2025, this measure was lifted by the HCSF.
Liquidity tools applied to the banking sector	
Liquidity coverage ratio	Effective 1 January 2022, LCR of 100% applies, for institutions supervised under the SSM as well as LSIs in France (although the restoration of the latter from the pandemic phase release has not been publicly announced).

Annex I. Table 3. France: Current Setting of Macroprudential Tools in France (concluded)

Instrument	Current calibration
Liquidity tools applied to the banking sector	
Net Stable Funding Ratio	As announced May 20, 2019, and effective June 28, 2021, banks must maintain the NSFR of at least 100%. This requirement is in effect in France as in all EU member states.
Other liquidity measures (e.g. loan to deposit ratio, currency based LCRs, liquid asset ratio etc.)	Effective June 30, 2010, a specific type of entities called "Sociétés de financement" (that can be assimilated to credit institutions but do not receive deposits from the public) benefit from a dedicated ratio, the "Coefficient de liquidité." This coefficient is very similar to the LCR (1-month time horizon).
Tools to address systemic liquidity and fire-sale risk in the nonbank sector	
Tools to address risks in asset management industry	The AMF can demand the (temporary) total suspension of subscriptions and redemptions on any French UCITS or AIF ("when exceptional circumstances so requires and if the interest of the unitholders, the shareholders, or the public so commands"). This power has been used in the past (2014 and 2020). The AMF updated its doctrine on October 7, 2022, to facilitate the adoption of LMTs. In particular, it aligned the conditions for introducing anti-dilution levies with those for swing pricing, and introduced a transitional period until December 31, 2023, during which gates could be introduced with a simple information by any means to the investors (for example, on the management company's website). This policy change allowed for a significant increase in the LMT equipment rate for French funds. Under Art.25 of AIFM, the AMF regularly assess the leverage of alternative investment funds and can impose leverage limits in case it detects a potential threat to financial stability.
Tools to address risks from SIIs and interconnectedness	
Capital surcharges on systemically important institutions	There are seven domestic systemically important financial institutions (D-SIFIs), referred to as Other systemically important institutions (O-SIIs) in EU regulation, whose buffers have been set between 0.25% and 1.5% of RWA. The capital surcharges for the 2024 exercise will apply effectively on January 1, 2026, and are as follows: BNP Paribas: 1.5%; Société Générale: 1%; Groupe Crédit Agricole: 1,5%; Groupe BPCE: 1%; Groupe Crédit Mutuel: 0.5%; HSBC Continental Europe: 0.25%; La Banque Postale: 0.25%. The same capital surcharge rates have applied and remained constant since January 1, 2019, except for HSBC Continental Europe which was first designated in 2020 and for Crédit Agricole whose buffer will increase by 50 bp from 2026.
Limits on the size of exposures between financial institutions (CRR art. 395):	An institution shall not incur an exposure to a financial institution the value of which exceeds 25 % of its Tier 1 capital or €150 million (whichever is higher), after considering the effect of credit risk mitigation.
Measures to address risks from financial institutions' cross border exposures (including reciprocity)	Under EU legislation, reciprocity is mandatory for the following three measures: (1) for CCyB rates below 2.5%, it is automatic; (2) risk weight adjustments for exposures related to real estate, for SA banks; and (3) LGD adjustments for exposures related to real estate, for IRB approach banks. Several reciprocity measures are currently in place.

Sources: IMF Macroprudential Survey and French authorities

[1] This is to be understood in the context of the SSM framework.