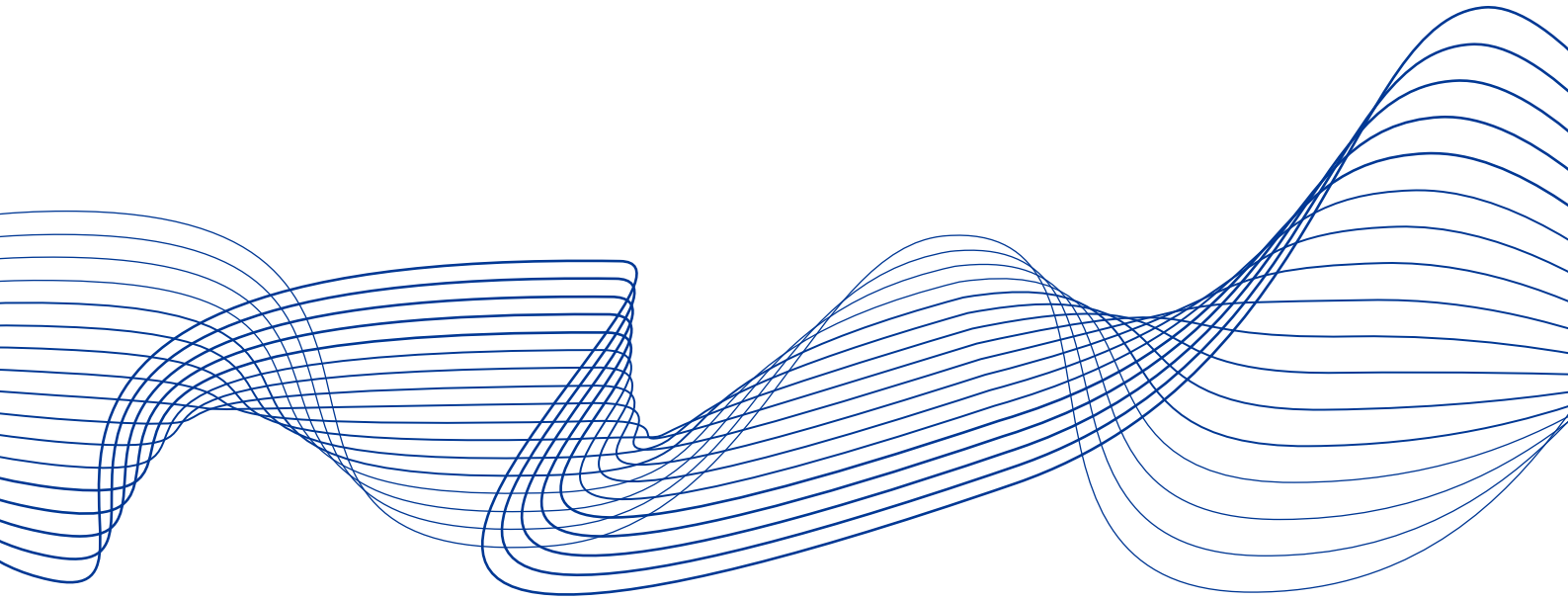
Review of the EU Macroprudential Framework for the Banking Sector

March 2022

A Concept Note



ESRB
European Systemic Risk Board
European System of Financial Supervision

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Foreword

Christine Lagarde, Chair of the European Systemic Risk Board

Large-scale and swift policy intervention in the European Union and abroad helped stabilise the economy. This included fiscal policy, labour market policy and monetary policy measures. They were complemented by measures targeted at the financial system to ensure a sustained flow of financing to households and businesses.

The reforms to the regulatory framework for banks implemented after the global financial crisis and euro area sovereign debt crisis helped avoid a financial crisis. Entering the COVID-19 pandemic, banks were funded with more and better-quality equity to absorb unexpected losses. They also retained more liquid assets to meet funding liquidity shocks. And resolution frameworks were in place offering more options than in the past to deal with failing banks had this turned out to be necessary.

Work is ongoing to fully implement internationally agreed reforms and to complete the broader regulatory reform agenda. This notably includes the full and faithful implementation of the finalisation of the Basel III agreement as well as the completion of Capital Markets Union and Banking Union. The reform agenda strives to make the financial system more stable, more efficient, and more reliable. This often comes in the form of restrictions, and hence at a cost to financial institutions. But this is a cost well worth paying as it ensures that our financial system remains resilient when faced with unexpected shocks and does not amplify economic crises when these shocks occur.

Financial stability remains one of the foundations on which to build the European Union of the future. It allows the financial system to serve European households and businesses and thus to contribute to sustainable economic growth across the EU. We should not be complacent, particularly at the present times. Increased indebtedness across the economy, elevated asset prices remain key vulnerabilities and cyber-attacks that are increasing in frequency and sophistication pose a risk. These and other vulnerabilities and risks need to be addressed such that the financial system can support the economic recovery from the pandemic and the twin green and digital transitions of our economies.

This is hence the right time to review whether our macroprudential toolkit for banks functions as we want it to, in light of the recent experience and of what might happen in the future. The banking sector remains at the core of the financial system in the European Union. The present ESRB Concept Note discusses the main challenges to be addressed and sets out what in the ESRB's view needs to be done to ensure that our macroprudential rules for banks remain fit for purpose and future proof. It is designed to inform and feed into the Commission's review of the macroprudential framework.

Christine Lagarde

Chair of the ESRB

Key concepts

1. The economic and social costs of financial crises are large. The aim of macroprudential policy is to reduce the probability and impact of such crises. The benefits of this only accrue over time, can seem abstract and are spread out across all stakeholders, while implementation costs are felt immediately and sometimes born by only a few stakeholders. This can lead to an inaction bias, whereas an effective macroprudential policy framework must foster prompt and decisive policy action.

2. The enhanced regulatory framework for banks, including macroprudential tools, served the EU well during the COVID-19 crisis. However, it remains to be tested through a whole financial cycle and in the absence of significant intervention by public authorities. Full, timely and consistent implementation of the outstanding Basel III reforms is crucial to further strengthening the framework. Resilient banks – both in terms of quality and quantity of capital – are better lenders, as they can continue to provide credit in times of crisis to businesses and households that are solvent, but liquidity-constrained.

3. The macroprudential toolkit contributed to resilience, even though it was used unevenly across the EU. Those Member States which had built up releasable buffers used them – at least partially – for macroprudential loosening during the COVID-19 crisis. In most, though, credit institutions made limited use of the capital freed up by micro- and macroprudential loosening. Reasons include a limited need to absorb losses due to monetary and fiscal support for the economy, fear of market stigma, uncertainty about future losses, muted demand from creditworthy borrowers, overlapping capital requirements and other factors, among them expected supervisory action to restore capital. Nevertheless, empirical evidence suggests capital relief measures were effective in supporting credit supply during the pandemic.

4. The experience gained by applying macroprudential provisions in the last ten years highlights the need for more consistent, forward-looking and actively countercyclical use of macroprudential instruments. A further overarching aim of reform is to reduce the complexity of the provisions, both procedurally and conceptually: this would facilitate their use by authorities without weakening existing safeguards for the integrity of the internal market.

5. Looking into the next decade, the priorities for the macroprudential toolkit for banks are: (i) ensuring that banks fund themselves with enough capital to match cyclical and structural systemic risks; (ii) enhancing the usability and effective use of capital buffers; (iii) closing gaps in the toolkit, notably by including borrower-based measures; (iv) ensuring consistent use of policy instruments across the EU.

6. More releasable capital can be obtained by building up the countercyclical capital buffer (CCyB) earlier and in a more forward-looking manner. This could be combined with a positive neutral rate, i.e. one that is positive in a standard risk environment. This could apply to the CCyB and/or the systemic risk buffer (SyRB) and be implemented using guided discretion by Member States.

7. ESRB analysis has shown that several banks, in particular systemically important ones, are not able to fully use their capital buffers, due to overlapping capital requirements. This is the case when dipping into the buffers would result in a breach of the parallel minimum requirements for the leverage ratio or minimum requirements for own funds and eligible liabilities (MREL). Regulatory capital buffers might therefore be (partially) ineffective. The advantages and disadvantages of potential mitigating options are discussed.

8. Risk weights play a crucial role in determining the amount of capital that must be held by banks to foster their resilience against different sources of risk. Therefore risk weights should not only incorporate idiosyncratic risks but also include a systemic risk component. As it is particularly important to ensure the appropriateness of risk weights for exposures secured by immovable property, several national authorities have increased risk weights pursuant to Article 124 of the CRR or adopted stricter national measures under Article 458. The latter introduced risk weight measures that take different forms, are based on different methodologies and take different types of considerations into account. For risk weights on residential and commercial real estate, a new single harmonised macroprudential article on risk weights replacing the specific provisions in Articles 124, 164 and 458 of the CRR should be created. This new article should rely on guided discretion, with the aim of striking the right balance between consistent application and flexibility. The experience gained with the use of Article 458 also suggests a few simplifications could be introduced, while keeping its status as an instrument of last resort.

9. The EU legal framework should be enriched by including borrower-based measures (BBMs) for residential real estate (RRE) loans in a targeted manner. This would ensure that a basic set of instruments is available in all countries to effectively mitigate risks related to RRE markets at both national and in turn also EU level. It is important that BBMs should be included in EU legislation in a way that allows sufficient flexibility to address national specificities and ensure they remain effective, rather than through fully harmonised definitions and uniform application throughout the EU. Similarly, decisions on activating and releasing BBMs, as well as calibrating and applying the measures overall, should be left in the hands of national authorities. The EU legal framework should therefore only provide a minimum level of harmonisation in line with the principles of subsidiarity and proportionality. The Commission should also consider what safeguards would be necessary to ensure the new set of macroprudential powers is used solely at national level, as the proposal to include BBMs in EU legislation is subject to the condition that the ECB's topping-up power does not apply. Nonetheless, common standards for the governance of the minimum set of BBMs should be set out, to reduce potential for inaction bias. Minimum harmonisation of BBMs at EU level would further align national legal systems, reduce the complexity resulting from the multitude of different national legal frameworks and facilitate the completion of the Single Market. It would also facilitate reciprocation of BBMs and mitigate systemic risk at the EU level. Including BBMs in EU law could go hand in hand with harmonising the definitions related to RRE and CRE loans in current EU reporting; this would reduce the costs of reporting for lenders and facilitate monitoring of RRE risks to financial stability across countries.

10. Congruent regulation which applies similar requirements to all entities carrying out the same type of financial activities, taking account of their specific risk profiles, should help prevent regulatory arbitrage and the transfer of risks to other parts of the system such as FinTechs and

BigTechs, which appear less regulated than banks but increasingly perform similar activities. Entity-specific tools could therefore be complemented with activity-based tools. Borrower-based measures, for instance, could in principle address all types of lending, regardless of the institutional form of the lender.

11. As investment funds, money market funds and other financial institutions represent an important source of wholesale funding for the banking sector, it is important to monitor liquidity flows at the scale of the whole EU financial system and ensure coherent system-wide analysis of liquidity risks.

12. To address the risk of cyber incidents having financial consequences in addition to operational ones, and even affecting confidence in the financial system's ability to provide critical economic services, the macroprudential mandate needs to be extended to cyber resilience. The current toolkit has limited capacity to develop specific cyber risk mitigants and address the risk arising from the increasing importance of third-party information and communication technologies (ICT) providers in the financial system. Additional cyber resilience requirements for systemically important institutions should be introduced to address the systemic risk stemming from these. To ensure proportionality, smaller and lower-capacity institutions might focus on strengthening cyber hygiene. The macroprudential mandate also needs to encompass third-party providers, as already foreseen for microprudential supervision in the proposed Digital Operational Resilience Act (DORA).

13. The EU should reflect on how macroprudential policy could contribute to increasing the resilience of credit institutions to climate-related financial risks – both transitional and physical. The ESRB, together with the ECB, is assessing the possible use of macroprudential policy instruments to address systemic risks related to climate change in the financial system. Preliminary findings indicate that, with some amendments, the systemic risk buffer and large exposure limits could potentially be relevant tools. As a growing body of analysis on climate-related risks becomes available, further adjustments to the macroprudential toolkit and new tools may be needed.

14. Inaction bias in macroprudential policy could be further reduced by clear allocation of responsibilities, greater transparency, better communication and clearer narratives, as well as more flexible instruments and simpler implementation and reciprocation procedures. Common methodologies, including taxonomies for identifying risk and calibration guidance for floors and benchmarks, can play an important role in addressing possible inaction bias and merit further assessment and elaboration. Ensuring cooperation, coordination and data exchange between micro- and macroprudential authorities, resolution authorities and central banks is also key.

Key words: buffer usability; simplification, risk weight measures, borrower-based measures; activity-based tools; hybrid risks; better cooperation.

1 Introduction

The Capital Requirements Directive and Regulation (CRD/CRR) aim to strengthen the resilience of the banking sector so it can better absorb economic shocks, while ensuring banks continue to finance economic activity and growth.[1] Banks have a crucial role in allocating capital efficiently in the economy by providing credit to those households and firms that can best use it, as well as supporting their liquidity and risk management, and are also essential intermediaries in payment systems. Banks therefore need to be able to withstand economic shocks to avoid harmful disruptions to their services.

Since 2014 the CRD/CRR also provide a macroprudential toolkit, enabling authorities to react to both cyclical systemic risks (e.g. those related to the financial cycle) and structural ones (e.g. those related to interconnectedness, financial market structure or the business models of financial intermediaries at a given point in time). Since CRD IV/CRR[2] came into force in 2014 and CRD V/CRR II[3] in 2020, the resilience of the EU banking sector has further increased, mainly due to higher capital requirements, better quality of capital and higher liquidity buffers. Additional progress is expected with the upcoming CRD VI/CRR III, which will incorporate the latest global regulatory reform, i.e. Basel III,[4] into EU law. A further review of EU regulation is expected in 2022, with a focus on the macroprudential policy toolkit. All proposals included in this Concept Note are therefore intended to be compatible with full, timely and consistent implementation of Basel III in the European Union.

Through this Concept Note the ESRB General Board takes a comprehensive view and proposes enhancements to the existing EU macroprudential framework for the banking sector – and beyond – for the next decade. Table 1 provides an overview of the ESRB's policy proposals and refers to the respective main sources of systemic risk in the EU that need to be addressed. **Section 2** outlines the main systemic risks in the EU banking sector over the next decade, showing why there is a need to enhance and adjust the macroprudential framework. **Section 3** focuses on two instruments which have been used frequently across the EU: capital buffers and risk weights. Based on the experience with these instruments over the last decade, specific areas are identified where the macroprudential framework needs to be enhanced. **Section 4** provides proposals to broaden the macroprudential framework in the EU to better mitigate systemic risks which have arisen in the last decade. First, the emergence of vulnerabilities

1 See European Commission, **Statement on prudential requirements**.

2 Directive (EU) 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, amending Directive 2002/87/EC and repealing Directives 2006/48/EC and 2006/49/EC (OJ L 176, 27.6.2013, p. 338); Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012 (OJ L 176, 27.6.2013, p.1).

3 Directive (EU) 2019/878 of the European Parliament and of the Council of 20 May 2019 amending Directive 2013/36/EU as regards exempted entities, financial holding companies, mixed financial holding companies, remuneration, supervisory measures and powers and capital conservation measures (OJ L 150, 7.6.2019, p. 253); Regulation (EU) 2019/876 of the European Parliament and of the Council of 20 May 2019 amending Regulation (EU) No 575/2013 as regards the leverage ratio, the net stable funding ratio, requirements for own funds and eligible liabilities, counterparty credit risk, market risk, exposures to central counterparties, exposures to collective investment undertakings, large exposures, reporting and disclosure requirements, and Regulation (EU) No 648/2012 (OJ L 150, 7.6.2019, p. 1).

4 See BCBS, **Reforms – Basel III**.

in the real estate sector across the European Union makes it indispensable to enshrine the availability of borrower-based measures in EU law. Second, liquidity risks need to be monitored and addressed taking a more system-wide perspective. Third, other institutions in the financial sector are providing bank-like services, implying that they are both benefiting from regulatory comparative advantages and also exposing themselves to bank-like risks. To address these risks, a holistic approach to reviewing the macroprudential framework is required. **Section 5** provides proposals to address new hybrid risks which are already threatening the stability of the banking sector and are expected to increase further, such as systemic cyber risks and climate-related financial risks. **Section 6** includes proposals to facilitate cooperation and coordination among authorities at all levels in a broader regulatory context.

Overall, the ESRB is aiming for a macroprudential policy in banking that:

- **…acts in a forward-looking manner.** It fosters resilience before systemic risks materialise, including through active countercyclical use of buffers and by completing the toolkit with borrower-based measures.
- **…shows flexibility in responding to structural changes.** It is able to address current and future systemic risks from structural changes to the financial system as well as cyber and climate change-related financial risks.
- **…forms part of a holistic framework.** It promotes congruent regulation across all activities in the financial system and facilitates cooperation between authorities at all levels.

Table 1

Proposals for policy tools to address the main sources of systemic risk in the EU

Measure	Proposals for amendments in the CRD/CRR toolkit (*and beyond*)* * *Proposals in italics refer to areas beyond CRD/CRR.*	Macroprudential objective	Source of systemic risk
Proposals to enhance the EU macroprudential banking framework (Section 3)			
Capital buffers	**CCyB** • Determine a more explicit role for cyclical indicators beside the credit-to-GDP gap (e.g. the qualitative dimension of credit) and better acknowledge measurement uncertainty. • Make early, forward-looking build-up more explicit (refer to the prospect of increasing systemic risks). • Allow the option to reduce the 12-month implementation period to six months without any need to explain exceptional circumstances. • Remove the 2.5% cap for mandatory reciprocity of the CCyB. • Encourage/allow the possibility for national authorities to set a positive neutral rate for cyclical risks. • Maintain the possibility to set CCyB rates for exposures to third countries. **SyRB** • Encourage/allow the possibility for national	**CCyB** • Increase macroprudential buffers that can be used during a crisis to absorb losses, while avoiding excessive deleveraging that would be harmful for the economy. • Promote forward-looking build-up of resilience via the CCyB, using a broader indicator base that captures cyclical risks from buoyant credit to the private non-financial sector. • Foster and facilitate reciprocation. • Reduce inaction bias on the part of macroprudential authorities. **SyRB** • Allow build-up of SyRB to	• Insufficient resilience and/or flexibility to the materialisation of cyclical and structural systemic risks triggered by developments in the macro-economic and financial environment.

Measure	Proposals for amendments in the CRD/CRR toolkit (*and beyond*)* * *Proposals in italics refer to areas beyond CRD/CRR.*	Macroprudential objective	Source of systemic risk
	authorities to set a positive neutral rate for structural and unknown risks. • Revise the cumulation rule for broad and sectoral SyRB rates. • Require mandatory reciprocity of the SyRB (above a materiality threshold). • Clarify that recognised foreign SyRB rates do not count towards the thresholds that trigger Commission approval or an EU governance procedure.	absorb unexpected and unknown external shocks. • Foster and facilitate reciprocation. • Reduce inaction bias on the part of macroprudential authorities.	
	O-SII buffer • Promote an EU-wide floor methodology with guidance for calibrating O-SII buffers. • Promote measures to address the window dressing problem (e.g. use averages over the year instead of year-end values).	**O-SII buffer** • Ensure more homogeneous application of O-SII buffer rates across the EU.	
	CCoB • Emphasise that the capital conservation buffer is a general backstop for loss absorption and should not be released by authorities.	**CCoB** • Maintain current level of resilience.	
	Protection of released capital • *During a severe systemic crisis, promote the use of soft power to indicate that capital freed up by regulatory measures should not be used for payouts.*	**Protection of released capital** • Support banks' ability to absorb losses during a crisis.	
	Buffer usability • Consider ways to mitigate impediments to banks' ability to use their buffers. • Consider increasing buffer usability by reviewing overlaps of requirements in the multi-restrictive framework. This requires amendments to the CRD/CRR, *also to the BRRD/SRMR*[5] *with respect to MREL. The current review of the crisis management and deposit insurance framework in the EU should be used for this, to ensure consistency with the macroprudential review.*	**Buffer usability** • Enhance buffer usability and the effectiveness of buffer releases.	
Risk weight measures	• Create a single article for risk weight measures for exposures secured by immovable property, built on guided discretion. Mandatory reciprocity subject to materiality thresholds. • Delete the provisions on risk weight adjustments from Articles 124 and Article 164 of the CRR and the stricter risk weight measures from Article 458.	• Avoid underestimating macroprudential or systemic risk in the risk-weighted prudential framework. • Act as substitute for the sectoral systemic risk buffer when the latter cannot cover the targeted risk.	• Systemic risk is not always perfectly reflected in the risk weights used for microprudential purposes.

[5] Directive 2014/59/EU of the European Parliament and of the Council of 15 May 2014 establishing a framework for the recovery and resolution of credit institutions and investment firms (OJ L 173, 12.6.2014, p. 190); Regulation (EU) No 806/2014 of the European Parliament and of the Council of 15 July 2014 establishing uniform rules and a uniform procedure for the resolution of credit institutions and certain investment firms in the framework of a Single Resolution Mechanism and a Single Resolution Fund and amending Regulation (EU) No 1093/2010 (OJ L 225, 30.7.2014, p. 1).

Measure	Proposals for amendments in the CRD/CRR toolkit (*and beyond*)* * Proposals in italics refer to areas beyond CRD/CRR.*	Macroprudential objective	Source of systemic risk
Article 458 (non-risk weighted) measures	• Simplify Article 458 of the CRR to improve the application of stricter non-risk weight measures, including extending the application period from two years to three. • Mandatory reciprocity subject to materiality thresholds, considering other instruments with equivalent impact where necessary. • Clarify that Article 458 can be activated not only when changes in the intensity of macroprudential or systemic risk occur, but also when the intensity or level of macroprudential or systemic risk is/remains elevated. • Clarify that hybrid risks such as climate-related financial risk and systemic cyber risks can also be sources of change in the intensity of macroprudential or systemic risk.	• Address systemic risks with specific national macroprudential measures when other instruments are deemed less effective. • Reduce inaction bias on the part of macroprudential authorities.	• Build-up and/or materialisation of specific national systemic risks that cannot be addressed by other instruments.
Proposals to broaden the regulatory perimeter (Section 4)			
Borrower-based measures	• Introduce a common minimum set of borrower-based measures in EU legislation for residential real estate (RRE) loans, i.e. loans related to the purchase of existing or construction of new residential property, at the disposal of national authorities, with sufficient coverage to effectively address sources of RRE vulnerabilities. • Maintain decision-making on activating, releasing and calibrating BBMs at national level. • Preserve flexibility in definitions and application of BBMs to address national specificities. • Introduce common standards for the governance of BBMs.	• Dampen the build-up of credit-driven real estate bubbles. • Strengthen the resilience of both borrowers and lenders against potential build-up of vulnerabilities stemming from the real estate market.	• Financial instability stemming from real estate markets and excessive borrowing by debtors in relation to their real estate exposures.
Liquidity measures	• Promote a system-wide regulatory perspective for monitoring and analysing systemic liquidity risks. • Clarify that the CRD/CRR regulate only LCR and NSFR and therefore do not prohibit additional liquidity instruments. • *Provide consistent macroprudential definitions of high-quality liquid assets (HQLA).* • *Promote implementation of countercyclical measures in margin and haircut requirements.*	• Increase resilience by increasing funding and loss absorbency. • Enhance analysis of the stock of HQLA held across all financial sectors and improve measurement of liquidity risks at the system-wide level using systemic liquidity stress tests. • Diminish procyclicality in margin calls that may lead to liquidity risks.	• Materialisation of systemic liquidity risks stemming from liquidity mismatches at non-bank financial intermediaries, amongst other things.
Activity-based measures	• Develop the macroprudential framework so entity-specific tools are complemented with activity-based tools. • Either apply consistent rules across all financial institutions when they perform the same activities, taking account of their specific risk profiles, or require them to adjust their activities accordingly. • Consider whether a dedicated macroprudential code that encompasses the macroprudential framework for the whole financial system is appropriate.	• Ensure congruent regulation to minimise regulatory arbitrage, i.e. risks being transferred to other parts of the system not suited to managing them optimally.	• Increasing systemic importance of bank-like activities by non-banks that are subject to a lighter regulatory regime (regulatory arbitrage).

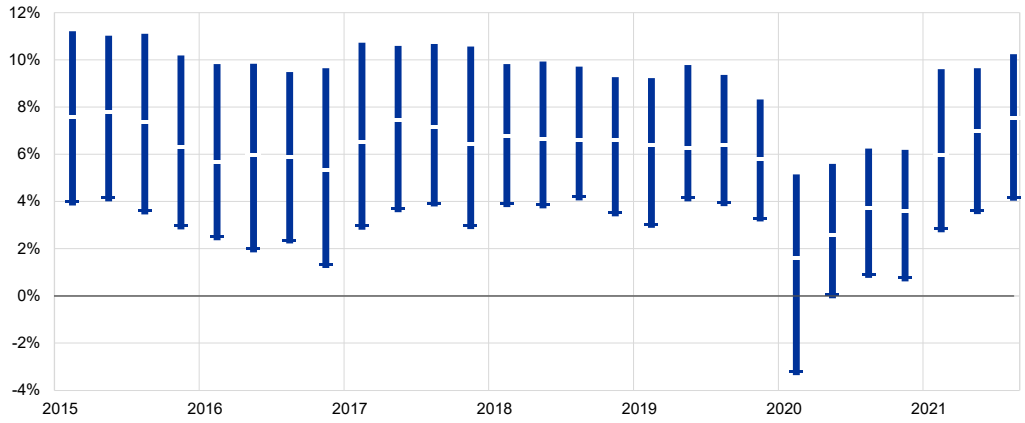
Measure	Proposals for amendments in the CRD/CRR toolkit (*and beyond*)* * *Proposals in italics refer to areas beyond CRD/CRR.*	Macroprudential objective	Source of systemic risk
Proposals to address hybrid risks in the next decade (Section 5)			
Cyber risk measures	• Expand the scope of the macroprudential mandate beyond financial institutions to cover third-party ICT providers (as foreseen for microprudential authorities in the proposed DORA). • New macroprudential tools could be included in the CRD/CRR *or in the forthcoming DORA*. • Introduce higher cyber resilience requirements for systemically important institutions. • Either apply concentration limits to third-party providers or require higher cyber resilience where third-party providers cannot be replaced. • Require macroprudential authorities to define the maximum acceptable level of disruption to critical economic functions which would not pose risks to financial stability. • Supplement data collection initiatives by sharing information between authorities.	• Address the risk of cyber incidents having financial consequences in addition to operational ones, or even affecting confidence in the whole financial system. • Ensure timely recovery of operational systems to mitigate contagion effects of cyber incidents. • Enable system-wide cyber resilience scenario stress tests to assess the level of operational disruption caused by cyber incidents. • Overcome lack of data at macroprudential level and facilitate risk assessment across jurisdictions and sectors.	• Disruptions to critical economic and financial infrastructure caused by large-scale cyber incidents.
Climate-related financial risk measures	• Existing tools such as sectoral SyRBs and large exposure limits could be relevant to addressing the systemic aspects of climate-related financial risk (CRFR), but some amendments are necessary. • Ensure sufficient flexibility in the macroprudential toolkit (e.g. concentration charges) to address materialisation of CRFR once more analysis becomes available. • Promote coordination among European countries when implementing measures to address CRFR. • Close climate data gaps and promote development of a harmonised and granular taxonomy and metrics.	• Increase ability to absorb unexpected losses caused by system-wide impact of CRFR (both transition and physical risk).	• Materialisation of known and unknown CRFR.
Proposals to strengthen cooperation in a broader regulatory and institutional context (Section 6)			
Co-operation and co-ordination between authorities	• Enhance cooperation and coordination between European and national authorities (including micro- and macroprudential as well as resolution authorities). • Ensure that all relevant authorities have access to the granular data needed to assess the systemic implications of idiosyncratic or system-wide stress. • Evaluate potential amendments to the CRD/CRR and the BRRD to address supervisory, MREL and data gaps. • Distribution restrictions when combined buffer requirements on top of risk-weighted MREL are breached should be automatic or discussed with the macroprudential authority. • Harmonise and simplify reciprocation to make the framework consistent.	• Ensure consistent regulatory measures and communication throughout the European financial system. • Facilitate cross-sectoral analysis of the whole financial sector. • Facilitate flow of information between macro- and microprudential as well as resolution authorities and central banks. • Facilitate/ensure proper functioning of the European internal market; create a level playing field for lenders.	• Lack of cooperation and communication between relevant authorities leading to a suboptimal policy response to systemic risks.

2 Systemic risks in the EU banking system over the next decade

Over the next decade the EU banking system will continue to face both cyclical and structural systemic risks. These must be considered carefully when reviewing the macroprudential toolkit. The first decade of macroprudential policy was marked by a challenging environment for banks, as they recovered from the global financial and the euro area sovereign debt crises. This period was characterised by low growth, subdued inflation, ample liquidity and a prolonged period of exceptionally low interest rates.[6] The recessionary episodes brought about a deterioration in the credit quality of European banks, while profitability and market valuations have been persistently low over the past decade, reflecting both cyclical and structural factors (**Figure 1**).

Figure 1
Return on equity of banks in the EU

(percentages; interquartile range and median; quarterly flows are annualised; latest observation Q3 2021)



*Source: **ESRB risk dashboard,** November 2021 (Issue 38).*

European bank valuations have hovered well below many of their global peers in recent years and estimates indicate that many institutions have not been able to earn the return required by investors (**Figure 2**).[7] A banking system that is not delivering sustainable profitability carries considerable financial stability risks from a business model perspective.[8] First, low bank profitability may impair

6 See **ESRB Annual Report 2018**; **ESRB Annual Report 2019**; **ESRB Annual Report 2020**; and "**Lower for longer – macroprudential policy issues arising from the low interest rate environment**", ESRB Report, June 2021.

7 See Altavilla et al., "**Measuring the cost of equity of euro area banks**", *Occasional Paper Series*, No 254, ECB, January 2021.

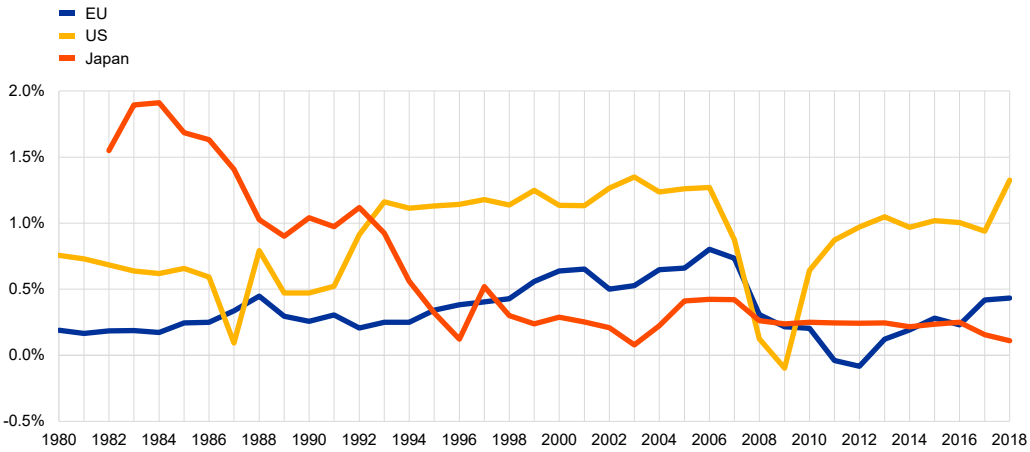
8 "Sustainable profitability" means an excessively high level may be equally undesirable, if it indicates banks are taking excessive risks. For a detailed discussion of low profitability for euro area banks, see "**How can euro area banks reach sustainable profitability in the future?**", *Financial Stability Review*, ECB, November 2018.

banks' capacity to serve the real economy and can signal unaddressed structural vulnerabilities.[9] Second, a banking system with low profitability is also more sensitive to the risk that market forces could drive up funding costs should confidence abruptly weaken.

Figure 2

Return on assets of EU, US and Japanese banks

(percentages, latest observation 2018)



*Source: **"Will video kill the radio star? – Digitalisation and the future of banking",** ASC Report, ESRB, January 2022.*
Notes: The data for the EU shows the median from the EU Member States in the OECD Banking Database (AT, BE, CZ, DE, DK, EE, ES, FI, FR, IE, IT, LU, NL, PL, SE, SI and SK) until 2009. From 2010 onwards, data for the EU from the ECB Consolidated Banking Data is used. US data refers to commercial banks only.

European banks' exposures to the real estate sector may trigger risks with a cyclical and/or structural component. Vulnerabilities here have been a source of concern for macroprudential authorities in the last decade. Over the past five years the ESRB has issued a number of country-specific warnings and recommendations on medium-term vulnerabilities in the residential real estate sector.[10] Most recently, in February 2022, a report on these was published along with five ESRB warnings and two recommendations,[11] bringing the total number of EEA countries which have been subject to ESRB action to sixteen (seventeen including the UK before it left the EEA). This regular re-assessment of vulnerabilities in all EEA countries aimed to create incentives for authorities to address cyclical and structural financial stability risks which might require new tools to be added to the EU regulatory toolkit. In addition, commercial real estate, which has been significantly affected by the pandemic, shows much stronger links with the non-banking sector than

9 See ECB, "**Euro area bank profitability: where can consolidation help?**", *Financial Stability Review*, November 2019.

10 2016: Austria (**Warning ESRB/2016/5**); Belgium (**Warning ESRB/2016/6**); Denmark (**Warning ESRB/2016/7**); Finland (**Warning ESRB/2016/8**); Luxembourg (**Warning ESRB/2016/9**); the Netherlands (**Warning ESRB/2016/10**); and Sweden (**Warning ESRB/2016/11**). 2019: Czech Republic (**Warning ESRB/2019/10**); Germany (**Warning ESRB/2019/11**); France (**Warning ESRB/2019/12**); Iceland (**Warning ESRB/2019/13**); Norway (**Warning ESRB/2019/14**); Belgium (**Recommendation ESRB/2019/4**); Denmark (**Recommendation ESRB/2019/5**); Finland (**Recommendation ESRB/2019/8**); Luxembourg (**Recommendation ESRB/2019/6**); the Netherlands (**Recommendation ESRB/2019/7**); and Sweden (**Recommendation ESRB/2019/9**).

11 See "**ESRB issues new warnings and recommendations on medium-term residential real estate vulnerabilities**", ESRB Press Release, 11 February 2022.

residential real estate markets. However, there are substantial gaps in the macroprudential framework for commercial real estate and non-bank financial institutions. Exposures to the non-banking sector are significant and increasing in a number of countries for residential real estate too.

This Concept Note is written taking into account structural vulnerabilities that may affect the banking system in the second decade of macroprudential policy. Overbanking and low profitability among EU banks remain key structural features of the EU financial system.[12] As a result, some banks may need to exit the market. As long as the build-up of a truly EU-wide banking sector remains far from complete, the provision of banking services will continue to be largely national. Fragmentation in the EU banking sector will also continue to impede efficient private sector risk-sharing and may give rise to financial stability risks. In addition, EU banks will be affected by several further structural features, of which the following three are pivotal:

1. **First, banks need to embrace digital transformation while ensuring long-term resilience to cyber threats.**[13] While this is inevitable and necessary, not least in view of new social trends, the banking system may be more exposed to cyber threats as a result of digitalisation. Ultimately, given their potential to disrupt critical financial services and operations, cyber incidents pose a systemic risk to the financial system and may impair key economic functions.

2. **Second, non-bank financial institutions such FinTech and BigTech[14] will become increasingly important competitors in providing financing for the real economy (Figure 3).** The role of non-bank finance is expected to increase further as additional progress is made towards a capital markets union. This is highly desirable from a market integration and risk diversification perspective. In the absence of a developed micro- and macro prudential framework for non-banks (including new providers), however, it may lead to an unlevel playing field. Beyond the competitive argument, the overall result is sub-optimal: risks can be shifted to institutions which do not fall under fully developed prudential regulation. High levels of risk-taking among non-banks without appropriate regulatory risk mitigants may spill over to the banking system, given the tight interconnections between the two. As a result, the effectiveness of macroprudential policies may be reduced.

3. **Third, climate change may imply a number of vulnerabilities for banks, including European ones, unless timely and decisive actions are taken at the global level.**[15] A warmer planet will cause a rise in the frequency and intensity of natural catastrophes (i.e. physical risks), potentially leading to higher direct and indirect losses for all financial institutions, including banks. At the same time, transition risks may occur when moving away from carbon-intensive activities. These could slow economic growth in the short term and would indirectly affect bank profitability. In addition, and more directly, transition risks could pose a risk to financial stability, either through their impact on the probability of default of borrowers in certain economic sectors or through a sudden repricing of the carbon-intensive

12 See "**Is Europe Overbanked?**", ASC Report No 4, June 2014.

13 See "**Systemic cyber risk**", ESRB Report, 2020.

14 See **EBA report on the impact of Fintech on incumbent credit institutions' business models**, 2018; "**Will video kill the radio star? – Digitalisation and the future of banking**", ASC Report, ESRB, January 2022.

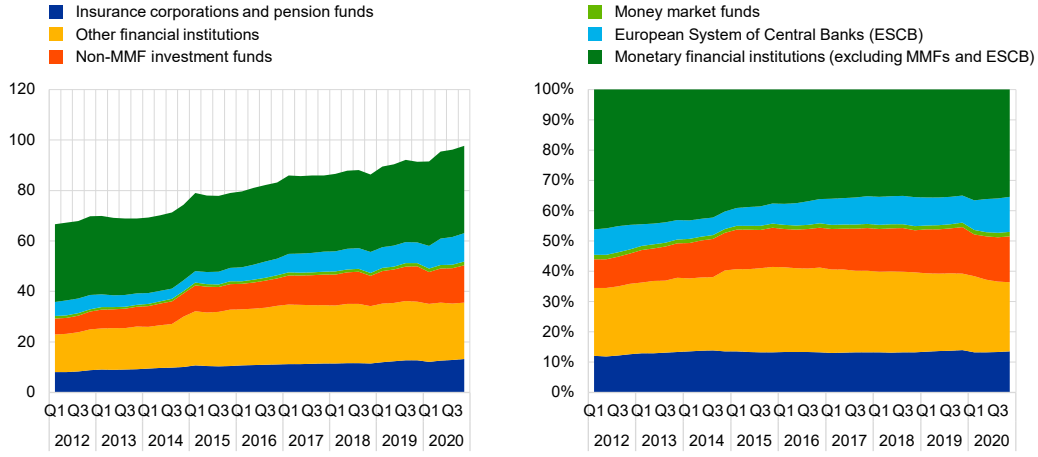
15 See "**Too late, too sudden: Transition to a low-carbon economy and systemic risk**", ASC Report No 6, February 2016; "**Positively green: measuring climate change risks to financial stability**", ESRB Report, June 2020; "**EU-wide pilot exercise on climate risk**", EBA, May 2021; "**Climate-related risk and financial stability**", ECB/ESRB Report, July 2021.

assets banks are exposed to. This would be especially true in a disorderly transition scenario.[16]

Figure 3

Total financial assets of the EU financial sector

(left-hand chart: EUR trillions; right-hand chart: percentages; latest observation Q4 2020)



*Source: **EU Non-bank Financial Intermediation Risk Monitor,** ESRB, August 2021.*
Notes: Based on financial accounts data for the total financial assets of the financial sector of the euro area plus non-euro area EU Member States. To exclude central banks from the MFI time series, ESCB is estimated based on BSI data for the Eurosystem and national central bank data for the non-euro area EU central banks. The latest observation is for the fourth quarter of 2020.

[16] See ECB/ESRB, **"Climate Related Risk and Financial Stability"**, July 2021.

3 Enhancing the EU macroprudential banking framework

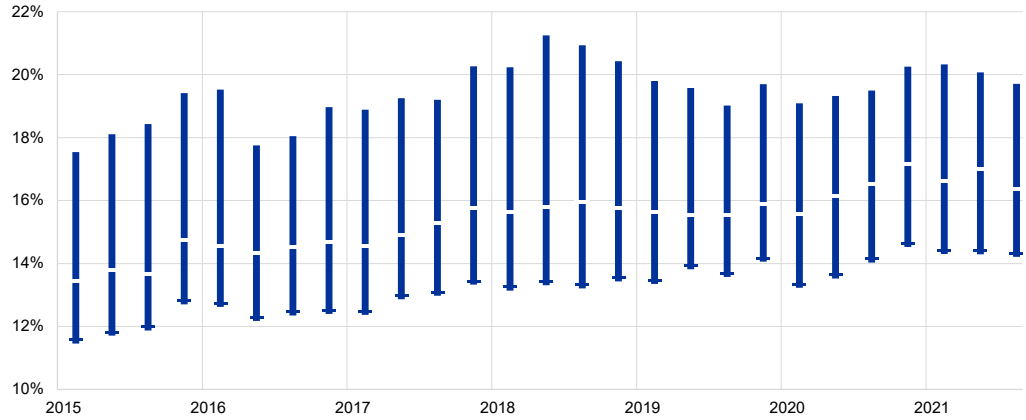
3.1 Macroprudential capital buffers

3.1.1 Experience of the past decade

A key objective of macroprudential capital buffers is to address systemic risks that emanate from banks and reduce procyclicality in the financial system.[17] The experience of the global financial crisis in 2007-09 led to a large overhaul of the regulatory framework for banks. One of the key lessons learned from the crisis was the need to mitigate the too-big-to-fail problem[18] and reduce incentives for banks to act imprudently and procyclically with negative consequences for the real economy. They also tend to leverage too much in normal times and deleverage excessively during significant economic downturns. As a result, regulators introduced the leverage ratio and capital buffers (to counter structural and cyclical systemic risks).[19]

Figure 4
CET1/risk-weighted assets ratio of banks in the EU

(percentages; interquartile range and median; latest observation Q3 2021)



*Source: **ESRB risk dashboard,** November 2021 (Issue 38).*

17 The buffers are: i) a capital conservation buffer; ii) a countercyclical capital buffer; iii) a systemic risk buffer; plus buffers for iv) global; and v) domestic systemically important banks.

18 See "**Evaluation of the effect of too-big-to-fail reforms**", FSB, April 2021.

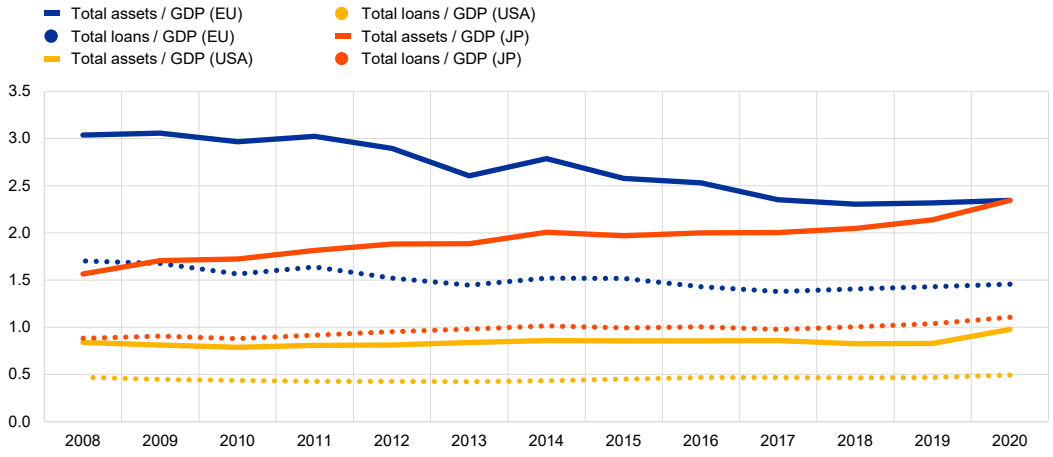
19 Not only the quantity of capital improved but also its quality. In addition, liquidity buffers were introduced.

Since the adoption of CRD IV/CRR, the resilience of the EU banking system has increased without negatively affecting credit supply. The median ratio of Common Equity Tier 1 (CET1) to risk-weighted assets (RWA) increased from around 13% at the beginning of 2014 to 17% in mid-2021 (**Figure 4**). European banks kept providing credit to the real economy while meeting higher capital requirements (**Figure 5**). Risk-weighted capital buffers, which sit on top of risk-weighted minimum requirements, support bank resilience and help conserve capital by establishing constraints on distributions that are activated when the buffers are breached. In contrast to minimum requirements, which must always be strictly fulfilled, capital buffers can be used, i.e. drawn down, when losses need to be absorbed during times of stress, and be replenished afterwards. In this way, the risk of excessive deleveraging and de-risking should be reduced. The purpose of capital buffers for banks is therefore to increase the resilience of the financial system and cushion the financial cycle. This is especially the case for the countercyclical capital buffer (CCyB), which is designed to be built up when cyclical systemic risks increase and released by authorities in a financial cycle downturn, enabling banks to use the regulatory capital freed up to support lending to households and firms without being restricted in distributions after a buffer breach.[20]

Figure 5

Total assets and total loans of EU and US banks as a share of GDP

(ratio to GDP, latest observation 2020)



*Source: **"Will video kill the radio star? – Digitalisation and the future of banking",*** ASC Report, ESRB, January 2022.

The buffer releases in March 2020 offered the first opportunity to assess how some features of the macroprudential buffer framework performed in a system-wide crisis. None of the buffers were originally designed to address an exogenous shock from a pandemic, and their use has not really fully been tested due to the massive fiscal and monetary support seen. Nevertheless the COVID-19 crisis, along with the experience of the past decade, provided valuable lessons and raised questions about: (i) buffer levels; (ii) interaction with other policies; (iii) buffer usability

[20] Banks using capital from released buffers are not subject to the restrictions associated with a breach of the maximum distributable amount threshold.

constraints resulting from interaction with the minimum requirements of the EU regulatory framework; (iv) the willingness of banks to use buffers; (v) the effectiveness of soft law to restrict dividend payouts in a severe crisis.

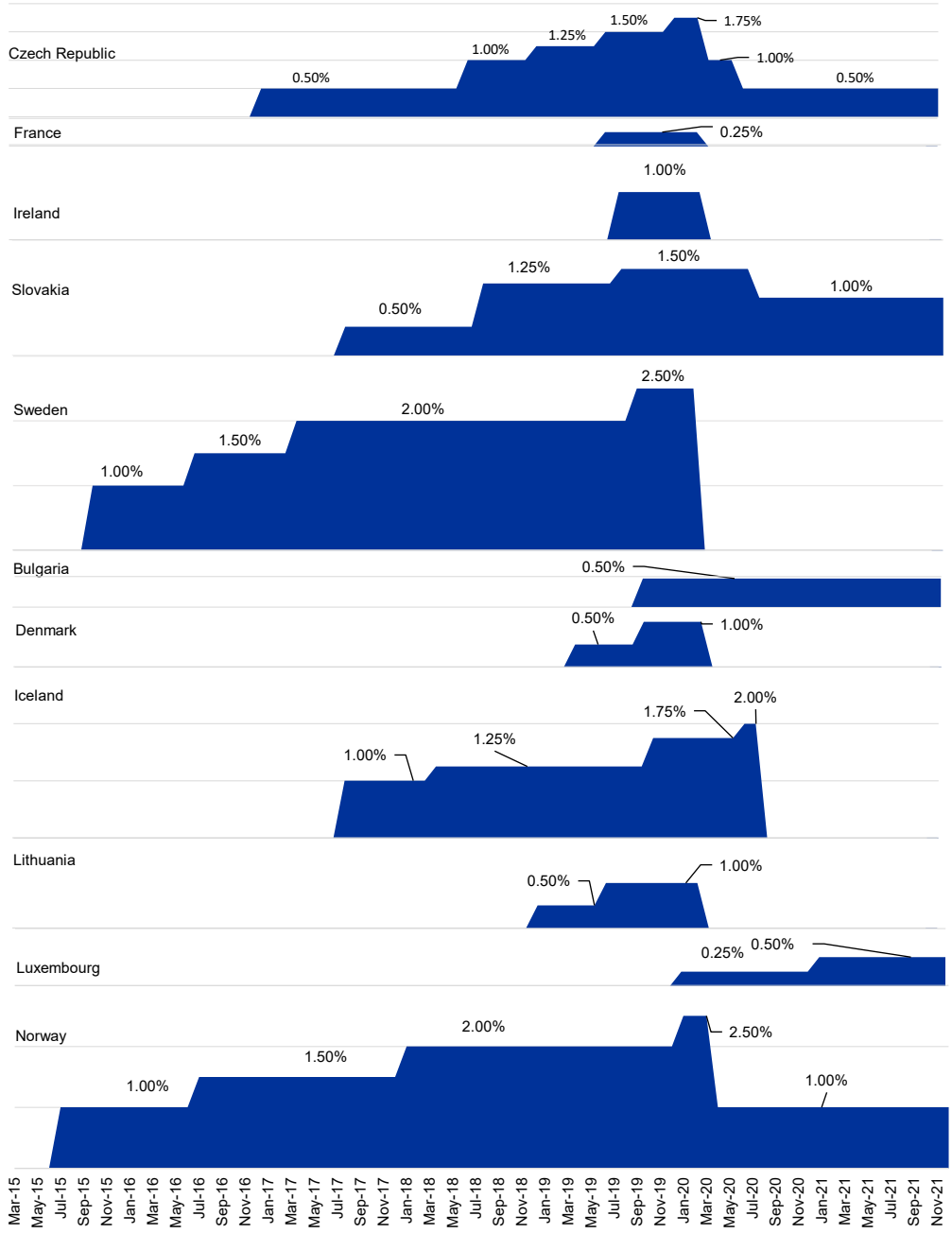
1. Buffer levels

The CCyB is the key macroprudential instrument for countering pro-cyclicality in the financial system by supporting credit supply during a downturn. It is the only buffer explicitly designed to be released in a financial crisis. Though the COVID-19 crisis was an external shock and not foreseen in cyclical risk assessments, most Member States released the CCyB as a supportive macroprudential measure when it occurred. However, the majority of Member States had only built up a limited CCyB before the crisis triggered this release. At the end of 2019 the aggregate CCyB amounted to only 0.3% of RWA in the EU, which is low compared to a combined buffer requirement that amounted to 4.0% of RWA.[21] CCyB rates were also highly heterogeneous across Member States. By the start of 2020 eleven countries had a positive domestic CCyB rate, but in only two cases was it as much as 2.5% (**Figure 6**). The remainder had an effective CCyB rate of 0%. For some countries this properly reflected subdued cyclical risks. For others the CCyB may have been too low despite rising risks, possibly due to over-reliance on the credit-to-GDP gap – a core indicator for the CCyB which was strongly negative for a long time in some countries. Over-reliance on this indicator may have led to an inaction bias.

[21] The combined buffer requirement means the total CET1 capital required to meet the requirement for the capital conservation buffer, plus the following as applicable: 1) a countercyclical capital buffer; 2) a G-SII buffer; 3) an O-SII buffer; 4) a systemic risk buffer. See "**The EU Banking Sector: First Insights into the COVID-19 Impacts**", EBA, May 2020 (incl. statistical annex).

Figure 6
Member States with a positive CCyB rate

(CCyB rate, latest observation December 2021)



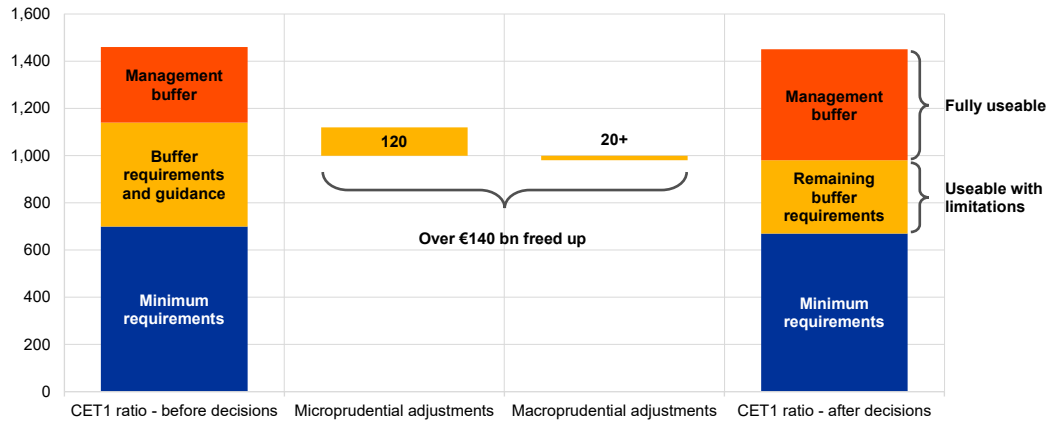
Source: ESRB.
Note: Countries not shown had not built up a positive CCyB before the COVID-19 crisis struck.

Increasing the CCyB in a more preventive and forward-looking way when times were normal would have enabled macroprudential authorities to release more capital during the crisis. Microprudential adjustments freed up €120 billion in the euro area at the beginning of the crisis, but only around €20 billion was provided by macroprudential ones (**Figure 7**), of which €12 billion came from CCyB releases. In sum, more macroprudential space,[22] including more releasable macroprudential capital, would have been desirable at the start of the crisis. Macroprudential authorities should therefore argue for timely, forward-looking increases in the CCyB to allow for a more preventive build-up of macroprudential space before risks become elevated.

Figure 7

In comparison to microprudential adjustments, macroprudential adjustments freed up only a fraction of overall CET1 capital in the euro area in response to the COVID-19 shock

(EUR billions, latest observation Q4 2019)



*Source: **"Macroprudential Policy Issues"**, Financial Stability Review, ECB, May 2020.*
Notes: The sample covers significant and less significant institutions, consolidated at the euro area level. Microprudential adjustments include the decision on regulatory adjustment to the Pillar 2 Requirements and making the guidance temporarily usable. Macroprudential adjustments include the releases of the countercyclical capital buffer (CCyB), the systemic risk buffer (SyRB) and the other systemically important institutions (O-SII) buffer. Revoked CCyB announcements and the postponed phase-in of O-SII buffers are not taken into account when calculating the total capital released. The chart does not include buffer changes that took place after July 2020.

2. Interaction with other policies

Timely and extraordinary use of monetary and fiscal policies at EU, euro area and national level during the COVID-19 crisis helped shield the financial sector from the immediate impact of the strong contraction in the economy, ensuring bank customers remained financially liquid and supporting further provision of credit to corporates and households. Other, more powerful policies therefore likely overshadowed the countercyclical function of the macroprudential buffer framework.

[22] Macroprudential space is defined as the sum of releasable and non-releasable capital buffers, i.e. the combined buffer requirements. If the macroprudential space overlaps with minimum requirements, not all space may be usable. Releasable buffers are a sub-category of macroprudential space: the countercyclical capital buffer plus the systemic risk buffer (if used for cyclical risks). Not all releasable buffers may be usable.

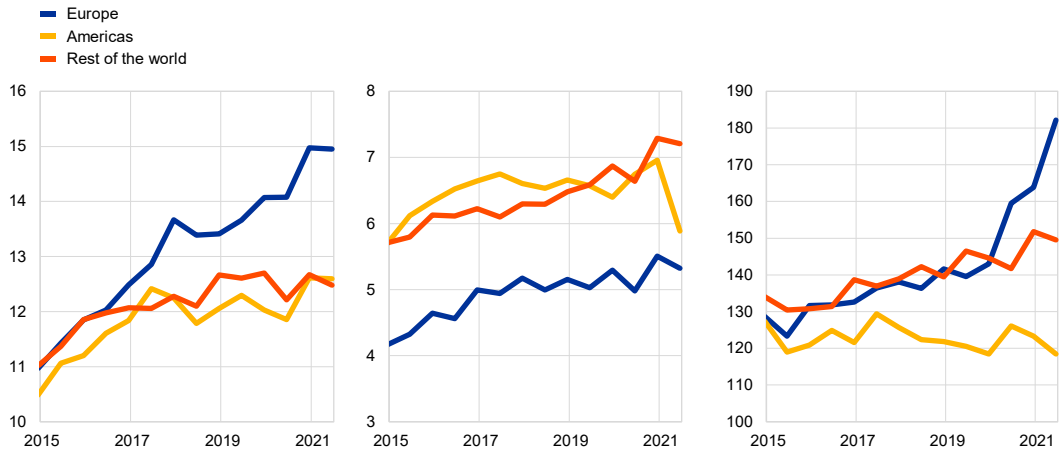
If authorities decide to withdraw some of these policies in future, the buffer framework may still be tested as credit institutions have to either dip into their buffers or make use of released CCyBs.

3. Interaction with other regulatory requirements and the ability to use buffers

One constraint on the use of buffers is that, due to regulation itself and under certain circumstances, banks have a limited ability to dip into them in times of stress (i.e. lower their actual CET1 ratio). If combined buffer requirements overlap with minimum requirements such as the leverage ratio and/or MREL, a bank is not allowed to lower its CET1 ratio below these minimum requirements. The three parallel requirements – risk-weighted capital requirements, the non-risk-weighted leverage ratio and MREL – have different objectives but interact with each other (see **Figure 8** for a comparison of CET1 and leverage ratios globally). For banks with a low risk weight density in particular, the leverage ratio may become binding, prohibiting them from dipping into the risk-weighted buffer. This can also be the case for MREL (which is not risk-weighted) if banks earmarked for resolution have low risk weight density and rely on buffer capital to fulfil requirements. On aggregate, the proportion of combined buffer requirements (CBR) which is usable under the leverage ratio and MREL constraints is estimated to be around 29%, with large variations across banks. Buffer usability for the larger and more systemically important banks applying internal risk weight models is estimated to be 27%, whereas for those adopting the standard risk weight approach the figure is 67%.[23]

Figure 8
CET1 ratios, leverage ratios and liquidity coverage ratios

(percentages, latest observation Q2 2021)



*Source: **Basel III Monitoring Report**, BCBS, February 2022.*

The multi-restrictive nature of the framework of risk-based and non-risk-based requirements – which was built intentionally to limit systemic and bank-specific risks – has

[23] See "**Report of the Analytical Task Force on the overlap between capital buffers and minimum requirements**", ESRB, December 2021, for analytical work and descriptions of mitigating options.

consequences for banks' ability to use the buffers: it limits the ability of the buffer framework to "breath with the cycle". Any adjustments to the buffer framework should not compromise the overall prudential requirements created by the multi-restrictive framework. Loss-absorbing capacity on a going-concern basis should also be maintained, avoiding excessive leverage and deleveraging. This would contribute to smoothing the financial cycle and help internalise negative external effects such as funding cost advantages stemming from expectations of a public bailout.

4. Banks' willingness to use buffers

Even where banks are not restricted by overlapping capital requirements, there may be several supply- and demand-side reasons why they would refrain from dipping into buffers or using released capital. One motive could be fear of market stigma, as dipping into a buffer may be perceived negatively by investors. This can affect banks' funding costs too; those perceived as weaker pay higher interest rates on their liabilities. Another reason could be that banks had modest needs to absorb losses due to the extraordinary monetary and fiscal support measures for the economy. Uncertainty about potential future losses and a temporary lack of supervisory guidance on the timeline for fully replenishing buffers could also have affected banks' willingness to use them. Demand for loans from creditworthy borrowers may have been subdued, as many firms and households hesitated to invest during the pandemic. Given the forward-looking perspective of the macroprudential review, there is merit in thinking about solutions upfront,before limitations on banks' willingness to dip into buffers arise again.[24]

5. Payout restrictions

The COVID-19 crisis led the ESRB to issue recommendations to restrict payouts (including dividend restrictions and share buybacks). These helped support capital levels in the financial system at a moment of high uncertainty.[25] The recommendations supported the actions of the monetary and fiscal authorities at a time when major support measures were being provided to stabilise the economy. Together with actions taken by member institutions, the ESRB system-wide recommendation to temporarily suspend distributions reduced the risk of weaker institutions feeling compelled to maintain them to signal their soundness to financial markets. This increased the stability of the whole banking system.[26]

In a severe systemic crisis, the ESRB would stand ready to issue such recommendations again. The ESRB could further recommend that restrictions be coordinated between the competent, the resolution and the designated authorities to ensure bank-specific and system-wide

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[24] See "**Principles for Operational Resilience**", BCBS, March 2021, which shows a positive and significant relationship between the management buffer, i.e. voluntary capital above the combined capital requirements, and corporate lending in the euro area. This would support the notion that banks try to avoid dipping into their buffers to prevent triggering possible supervisory or market responses.

[25] A first recommendation was issued in March 2020, followed by a second recommendation which amended and extended it in December 2020. In September 2021 the ESRB decided to let the recommendation expire. The first recommendation applied to credit institutions, investment firms, insurance and reinsurance corporations and central counterparties (CCPs). From December 2020 CCPs were exempted.

[26] Temporary system-wide payout restrictions may address collective action problems and ensure that released capital stays in the system. However, they could have negative market implications for European banks and reduce investor's appetite, thus increasing funding costs.

views complement each other. Relevant authorities should communicate to banks the need to use the released capital prudently, so as to ensure freed-up regulatory capital is temporarily not used for payouts.

3.1.2 Facilitating the build-up of releasable capital buffers

Experience to date with the capital buffer framework highlights possible regulatory improvements. As mentioned before, the framework is impaired if buffers are not built up or released in a timely manner, or banks are unable or unwilling to draw down their capital buffers while nevertheless being imprudent with payouts. Risk-weighted capital buffers may also be less effective if the risk weights do not sufficiently reflect systemic risk.

The current level of resilience needs to be at least maintained, while enabling more flexible and preventive activation of the CCyB. This would make it easier for authorities to build up the CCyB in a forward-looking perspective, taking a broader range of cyclical indicators and measurement uncertainty into account. Structural buffers should not be lowered, so as to retain the current level of resilience. It is important to keep the capital conservation buffer (CCoB) at 2.5% to preserve sufficient capital for potential future loss absorbency.

To encourage more active use of the CCyB, the legal framework should increase the weight attached to cyclical indicators other than quantitative measures of excessive credit growth. The current framework focuses mainly on quantitative measures of excessive credit to the private non-financial sector and the credit-to-GDP gap as a lead indicator. This reflects the experience of the global financial crisis: in the past, the gap empirically showed good early warning properties for financial crises, on average. However, action might also be necessary when early signs of cyclical risks are looming, but overall quantitative credit growth is not yet excessive. The CRD already provides for use of indicators of cyclical risk. Increasing their weights would be a small refinement that is easy to achieve. A broader variety of indicators capturing cyclical risks from private non-financial sector imbalances should be taken into account when a decision is made to use the CCyB. The credit-to-GDP gap should remain an important indicator, but not the central one.

EU law should make it easier for authorities to increase the CCyB when they expect cyclical risks to increase. In the current text, activation and increase are conditional on a material increase in systemic risk. That might be too late to build up the CCyB: lags in data availability, decision making and the 12-month implementation phase mean earlier activation would be more effective. Recital 80 of the CRD should be revised to allow for policy action when there are prospects of broad and increasing cyclical systemic risks. If desired, the ESRB could facilitate early and forward-looking use of the CCyB by conducting risk analyses and issuing recommendations. For early activation, legal changes to the text might entail only minor refinements within the current framework, in line with Basel standards.

In addition, national macroprudential authorities could choose to implement a positive neutral rate for the CCyB and/or the SyRB. This would increase banks' resilience as well as the releasable macroprudential space. A positive neutral CCyB could be justified, for example, on the grounds that it provides insurance against measurement and assessment uncertainty over the magnitude and persistence of cyclical risks and lags in decision making. Grounds for having a

positive neutral SyRB could be to have a loss absorption buffer for unexpected shocks ("unknown unknowns"), such as a pandemic or a "black swan" event. National macroprudential authorities could set a positive neutral rate, for example 1% or 2%, based on their assessment of systemic risks. This would be compliant with Basel standards, since it would not undermine global minimum standards. Building up a positive neutral CCyB or SyRB could be phased in over 12-24 months, for instance, to reduce short-term transition costs for banks. While the CCyB would likely target domestic exposure, the SyRB could also target total exposure (in the case of domestic banks). The ESRB could update and expand its guidance on these buffers, for example in recommendation ESRB/2014/1.

Macroprudential authorities should be given the option to reduce the CCyB phase-in period from 12 months to six without having to argue for exceptional circumstances. Currently, banks have 12 months to implement the CCyB once it has been announced. This can be shortened, for example to six months, in exceptional circumstances. Allowing this without the need to prove exceptional circumstances would help restore buffers after a release has proved unnecessary because no losses had to be absorbed, or where banks can fulfil the CCyB from excess capital.

Both macroprudential and microprudential authorities should closely coordinate their decisions and timelines for replenishing buffers. The effectiveness of the current system is limited by asymmetries. On the one hand, the microprudential authority approves the capital conservation plans of banks that have dipped into their buffers. On the other hand, it is generally macroprudential authorities that set buffer rates, decide when buffers should be released and make announcements about the horizon over which banks typically do not need to expect higher buffer rates. Ideally, replenishment decisions after a system-wide buffer release should be coordinated, in particular when G-SIIs/O-SIIs are concerned, due to their systemic importance.

3.1.3 Ensuring consistency between different regulatory frameworks

The ESRB report on overlapping capital requirements discusses options for improving buffer usability.[27] Creating capital buffers was a core improvement after the global financial crisis. It is essential that banks are able to use their buffers to absorb losses in a crisis. The parallel minimum requirements, namely the leverage ratio and MREL, may restrict the ability of banks to dip into these buffers. One option for improving bank's ability to use capital buffers within the multi-restrictive framework is the leverage ratio buffer: this is a buffer add-on applied on top of the minimum leverage ratio (which is not risk-weighted) and mirrors the risk-weighted capital buffers via a conversion factor. The following paragraphs describe how a leverage ratio buffer works and outline the advantages and disadvantages of extending it.

Starting in 2023, a leverage ratio buffer will be applicable for global systemically important banks (G-SIIs). The G-SII leverage ratio buffer mirrors the G-SII buffer via a conversion factor of

[27] See "**Report of the Analytical Task Force on the overlap between capital buffers and minimum requirements**", ESRB, December 2021. Other options mentioned in the report that technically mitigate the overlap include increasing the CBR or setting higher risk weights, setting a minimum share of eligible liabilities with which MREL has to be met and phasing out AT1 and/or T2 from regulatory capital.

50%. It sits on top of the minimum leverage ratio requirements and improves the resilience of G-SIIs by limiting the degree of leverage they can take. In contrast to the minimum leverage ratio requirement, which has to be fulfilled at all times, banks can temporarily dip into the leverage ratio buffer, as they can with risk-weighted capital buffers. The leverage ratio buffer concept improves both the resilience of banks and the usability of the risk-weighted capital buffers. It currently mirrors just the G-SII buffer, and hence only applies to G-SIIs. The G-SII leverage ratio buffer can be met with Tier 1 capital.[28] If the leverage ratio buffer were to be met with the same type of capital as the risk-weighted capital buffers, i.e. CET1 capital, buffer usability would improve further.

The leverage ratio buffer could be extended to mirror all risk-weighted capital buffers. A leverage ratio buffer mirroring all capital buffers (i.e. CCoB, SyRB, the O-SII/G-SII buffer and CCyB) would be partially releasable, as a CCyB release would simultaneously release the CCyB component of the leverage ratio buffer. The ESRB report shows that a leverage ratio buffer of this sort would improve usability significantly. This is particularly the case when a bank's risk weight density is low.[29] At the same time, mirroring all capital buffers in the leverage ratio buffer would result in a stronger increase in capital requirements compared to only mirroring a subset of risk-weighted buffers.

Alternatively, the leverage ratio buffer could be extended to mirror only the O-SII buffer, as is the case with the G-SII buffer. If O-SIIs were subject to a leverage ratio buffer similar to G-SIIs, this would complement the framework for systemically important banks and increase consistency. It would be proportionate in the sense that banks of higher systemic importance would be subject to tighter regulation than smaller banks. Mirroring only the G-SII or O-SII buffer would result in a lower increase in capital requirements, but also have a smaller impact on improving buffer usability than a leverage ratio buffer mirroring all capital buffers.

The ESRB Handbook Addendum provides operational details such as the conversion factor that maps the capital buffers into the leverage ratio buffer.[30] The capital increase associated with implementing a leverage ratio buffer is driven by the conversion factor: the higher this is, the higher the net increase in capital requirements. A common conversion factor for all risk-weighted buffers would be the least complex solution, but would not differentiate between individual buffers. While countries already seem to be able to implement such buffers nationally,[31] amending the CRD/CRR to allow an EU-wide approach to their design and function could be considered.

If the leverage ratio buffer is not extended this time, the subject should be considered as a priority at the next macroprudential review. A higher leverage ratio buffer would lead to an

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28 Tier 1 capital comprises Common Equity Tier 1 (CET1) and Additional Tier 1 (AT1).

29 The average overall usability of the combined buffer requirements (CBR) would increase significantly, from 29% to 77%, if all risk weight buffers were mirrored by a leverage ratio buffer with a conversion factor of 50%. The resources that would need to be raised to cover shortfalls and maintain the management buffer under the assumptions made would increase by 0.82% of RWA or around €60 billion (CBR amounts to 3.8% of RWA). Source: ESRB, "**Report of the Analytical Task Force on the overlap between capital buffers and minimum requirements**", December 2021. In contrast, mirroring only O-SII buffers in the leverage framework with a 50% conversion factor would lead capital requirements to rise by €6.7bn. Source: own calculations. On the other hand, if banks are unwilling to use leverage ratio buffers, any non-releasable leverage ratio buffer that overlaps with the combined buffer requirement could in fact reduce the usability of releasable risk-weighted capital buffers.

30 See "**Handbook on Operationalising Macroprudential Policy in the Banking Sector. Addendum: Macroprudential Leverage Ratios**", ESRB, June 2015.

31 For example, via Article 458 of the CRR.

increase in capital requirements. If this is deemed undesirable while Basel III is being implemented, the ability of banks on average and in particular of the systemically important banks to use their buffers will remain limited. The final Basel III agreement requires implementation of the output floor, which limits the reduction in required capital that banks can derive from using internal model-based risk weights to calculate their capital requirements. The ESRB supports full, faithful and timely implementation of Basel III, as this will be beneficial from a financial stability viewpoint. It will however have little impact on improving buffer usability. If regulatory adjustments to the restricted buffer usability are not implemented in this review, the extension of the leverage ratio buffer to O-SIIs or all banks as well as other mitigating options should be considered at the latest in the next macroprudential review. In the meantime banks will have further adjusted to Basel III.

A fundamental and far-reaching way to achieve full buffer usability would be to avoid, or at least reduce, double counting of the same unit of capital for both buffers and parallel minimum requirements. The regulatory framework is multi-restrictive by construction, i.e. different requirements exist in parallel and can overlap. At the same time, macroprudential buffers are meant to absorb losses. As mentioned above, in some circumstances overlapping requirements restrict the ability to fully use capital buffers to absorb losses as a going concern, because the same capital is used to meet parallel minimum requirements, such as the leverage ratio or MREL.[32] As a result, a bank is restricted in several dimensions, which is a fundamental aspect of the current framework. Removing the overlap between the requirements of the multi-restrictive framework to increase buffer usability would require changes to the CRD/CRR. This should also be discussed at Basel level, as it would be conceptually different compared to the current set-up with regard to the fungibility of capital. Changes would also be necessary to the BRRD/SRMR with respect to MREL. The current review of the crisis management and deposit insurance (CMDI) framework in the EU should be used to ensure consistency here with the macroprudential review.

3.1.4 Reducing inaction bias and improving consistency in the use of capital buffers

As noted by the ESRB,[33] O-SII buffer rates differ markedly across Member States for similar levels of systemic importance in the national banking system. For the SSM area, a minimum floor methodology currently applies, with the possibility of top-up by the ECB. To address differences in buffer rates of banks that have similar scores, a floor methodology is a first step towards limiting heterogeneity at the lower end. An EU-wide floor methodology would have the advantage of not unduly constraining jurisdictions that consider a higher rate more appropriate given their specific national systemic risks, while still ensuring a minimum degree of harmonisation. The current ECB floor for the SSM area indicates a commonly agreed lower bound, but the appropriate level could be higher, depending on national specificities. Current implementation

[32] There is a difference between the way MREL interacts with risk-weighted buffers and with the leverage ratio, which is not risk-weighted. MREL expressed in risk-weighted terms already cannot be counted for the buffers. MREL expressed in terms of the leverage ratio, however, can.

[33] See "**A Review of Macroprudential Policy in the EU in 2019**", ESRB Report, April 2020; also cited in **EBA Report on the appropriate methodology to calibrate O-SII buffer rates**, December 2020.

suggests floors are misinterpreted as the appropriate buffer in some countries: O-SII buffers are still set at the minimum (floor) in some Member States.

EU-wide floors and guidance on O-SII buffer rate setting could help avoid inaction bias, increase consistency in macroprudential regulation across Member States and strengthen the Single Market. While recognising different risk preferences across Member States, in general a similar level of systemic risk should lead to a consistent policy response. That would foster appropriate resilience in Europe. An EU-wide floor is not a panacea for all unwarranted heterogeneity, however. Hence, this first step should be accompanied by an EU-wide methodology to guide how O-SII buffer rates are set. This would help to avoid inaction and reduce heterogeneity. A methodology of this sort, possibly developed by the ESRB with the involvement of the ECB and the EBA, would counter systemic risk in a more homogeneous way across Member States while further strengthening the resilience of O-SIIs, and thus the European banking system as a whole.

Using averages over the year instead of year-end values when identifying O-SIIs would reduce the incentives for window dressing. The use of averages (at the reporting frequency) could limit the volatility in prices seen in some markets around the year-end as institutions try to optimise their balance sheet for the reporting date. It could also reduce the volatility of scores from year to year. Increased predictability is beneficial for financial institutions' capital plans and provides more transparency to market participants. Given the bucket methodology used by most European countries, the use of annual averages could avoid sudden cliff effects as an institution changes from one bucket to another. Further, the use of averages mitigates the consequences of window dressing, where banks fine tune their metrics for the reporting date.[34] This behaviour poses a risk that reported numbers show a snapshot rather than a solid statement of banks' systemic footprint. For indicators that feed into to the O-SII designation, window dressing might lead to scores that do not reflect a bank's actual systemic relevance. Hence banks might not be designated as O-SIIs at all or their scores might be too low, leading to lower O-SII buffer rates. If the use of averages over the year does not capture the increase in the systemic importance of a growing institution (e.g. by a merger) promptly, this can be reflected in supervisory discretion.

Capping mandatory reciprocity of CCyB rates at 2.5% should be removed. This would lower the perceived hurdle to go beyond a 2.5% CCyB and implement ESRB Recommendation ESRB/2014/1 (Principle 6). Given that the CCyB rates are weighted by the share of exposures to each country, any country-level CCyB above 2.5% would typically translate into a much smaller bank-specific CCyB as a percentage of risk-weighted assets. Extending reciprocity above 2.5% would promote the internal market and encourage national macroprudential authorities, which would have the certainty of knowing this would be automatically applied to foreign lenders. As this is stricter than Basel, it would be perfectly compatible and compliant with the Basel minimum standards.

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[34] See Garcia et al., "**Window dressing systemic importance – Evidence from EU banks and the G-SIB framework**", *EBA Staff Paper Series*, No 12, April 2021; Garcia et al., "**Is window dressing by banks systemically important?**", *BIS Working Papers*, No 960, August 2021; and "**Does the G-SIB framework incentivise window-dressing behaviour?**", *Macroprudential Bulletin*, ECB, October 2018. Window dressing could be reduced by averaging, but may not disappear unless maximum values are taken into account or higher frequency data reported for those indicators more prone to it.

The possibility of setting CCyB rates for exposures to third countries should remain. The CRD mandates the ESRB to address risks arising from excessive credit growth in third countries and ensure a coherent approach to setting CCyB rates for exposures to third countries. In particular the ESRB may, in recommendations, provide guidance to macroprudential authorities on the appropriate CCyB rate for exposures to a third country where a CCyB rate has not been set or is not sufficient to protect EU financial institutions. These measures have not yet been activated. A review of the provisions to promote more active use might be appropriate. It is important that the coordination role of the ESRB is retained so potential inconsistent application of the CCyB for third countries does not lead to fragmentation of the Single Market.[35]

A revision of the rules on the sectoral systemic risk buffer (SyRB) could make it easier to apply by weighting sectoral rates with the size of the exposure class they apply to. Currently, SyRB rates on all exposures are treated the same as sectoral SyRB rates, i.e. by adding up both the general SyRB and sectoral SyRB rates, including when cumulating them with O-SII and G-SII buffers for the purposes of calculating combined rates to be compared with the thresholds determining appropriate governance procedures. As sectoral rates would potentially need to be set at higher levels to achieve the desired resilience effect, but only apply to the sectoral exposures, the sectoral rate should be treated as such by weighting it with the sectoral share in all exposures. In this way, the cumulative combined SyRB/G-SII/O-SII rates would reach the 5% threshold that would trigger a more burdensome approval procedure less frequently.[36] SyRB rates on domestic exposures would therefore also be weighted by the share of domestic exposures in all exposures. Alternatively, the 5% threshold above which authorisation from the Commission is required could be removed so as not to disincentivise prudent setting of buffers.

Recognised SyRB rates should not count towards authorisation thresholds. To promote reciprocation and the integrity of the EU internal market, recognised SyRB rates should not be considered for the stringent procedures that are triggered when the combined SyRB rate exceeds 3% or the cumulative SyRB/O-SII/G-SII buffer rate is higher than 5%.

3.2 Risk weight measures

3.2.1 Experience of the past decade

Some macroprudential authorities in the EEA (Belgium, Estonia, the Netherlands, Norway, Sweden, and previously Finland) used Article 458 of the CRR to introduce stricter risk weight measures. They acted to address macroprudential concerns generated by changes in the intensity of the macroprudential or systemic risks that were not being sufficiently addressed by internal ratings-based approach (IRB) risk weights for exposures secured by residential property. Over the

[35] Please refer to the ESRB response to the European Commission's consultation on the review of the central clearing framework in the EU for further reflections on macroprudential buffers applicable to foreign exposures.

[36] According to Article 133(11) of the CRD V, if the combined SyRB rate is higher than 3% and up to 5%, the national authority must request the Commission's opinion. For combined SyRB rates above 5%, national authorities must seek the authorisation of the Commission, as laid down in Article 133(12).

years, several authorities have reported that the low IRB risk weights for mortgage exposures are mainly driven by a fall in probability of default (PD) estimates observed in the past rather than low loss given default (LGD) estimates. In general, risk weights have a direct and crucial impact on how much capital a bank needs to fulfil its risk-based capital requirements (minimum requirements as well as buffers).[37] Even when internal models (i.e. the IRB approach) are meant to fully cover all essential microprudential risks, they may still fall short of capturing macroprudential risks.[38]

Article 458 is designed to be a last resort, i.e. other macroprudential tools that can address the risks identified appropriately and effectively must be considered first. However, no other macroprudential tools in the CRD/CRR allow risk weight floors for banks to be set using internal models. Authorities may only apply Article 124 to raise risk weights secured by mortgages on immovable property under the standardised approach (SA). Article 164, on the other hand, only allows the minimum LGD value to be increased for retail exposures secured by immovable property in IRB models. Measures under both articles are subject to automatic recognition. While Article 124 has been used by several countries (Ireland, Croatia, Lithuania, Malta, Poland and Slovenia),[39] Article 164 has been implemented only once (in Norway).

3.2.2 Streamlining risk weight measures for real estate exposures and simplifying Article 458 of the CRR for other than risk weight measures

Ensuring a proper correspondence between risk weights and macroprudential risks is key to preserving resilience in the banking sector. Based on previous experience and looking ahead to the next decade, both the risk weight framework concerning macroprudential measures and measures under Article 458 need to be adjusted in two ways:

1. Adjustments to risk weight provisions for real estate

Creating one single macroprudential article on risk weights for real estate exposures would foster consistency, reduce complexity and enhance the proper functioning of the Single Market. The new single article should frame the use of a standard macroprudential risk weight tool, no longer restraining it to being a last resort. The macroprudential provisions adjusting risk weights in Articles 124 and 164 and the stricter risk-weight measure in Article 458 should be removed. The new risk weight measure could act as a substitute for the sectoral SyRB when underlying systemic

37 All risk-based capital requirements (minimum and buffers) are calculated as a share of risk-weighted assets. A reduction of 5% in risk weights equals a reduction of 5% in the capital needed to fulfil any given requirement.

38 Internal models which rely on historical data risk underestimating the link between real economic developments and future financial sector losses. For example, in the COVID-19 crisis the various support measures introduced by authorities had an impact on borrowers' financial conditions (e.g. lower default levels) and behaviour (e.g. consumption) and therefore impacted the output of internal models.

39 For the standard approach, Article 124(2) of the CRR requires relevant authorities to conduct periodic assessments on whether risk weights for exposures secured by immovable property adequately reflect the actual risks inherent to those exposures based on the loss experience of such exposures and forward-looking developments in the immovable property markets.

risk in the real estate sector is too large to be covered by this sectoral buffer.[40] Box A1 (see Annex) summarises the ten main features to be included in the new single macroprudential article.

The activation and calibration framework for a new risk weight measure should rely on a guided discretion approach which aims to strike the right balance between consistent application and flexibility. This means that risk weight measures should be set combining a rules-based approach with discretionary powers to respond appropriately to the risk identified. Guided discretion would provide a minimum level of harmonisation, striking a balance between consistency across Member States and flexibility to cater for national specificities while also fostering peer-learning and facilitating reciprocation.

The upcoming introduction of the output floor in European regulation would not eliminate the need to use risk weight measures for real estate in the next decade. The output floor (which is a lower bound computed on an aggregated basis in relation to the standardised approach) does not address macroprudential or systemic risk, but rather aims at reducing excessive variability in risk-weighted assets and enhancing the comparability of risk-weighted capital ratios. Even after it has been implemented, risk weights for real estate exposures could remain insufficiently low in light of systemic risks, despite the overall risk weight level still complying with regulation.

2. Strengthening and simplifying Article 458 of the CRR for other than risk weight measures

Although Article 458 remains an instrument of last resort, it needs improvement in five ways. First, activating any stricter measure should not depend solely on deterioration in systemic risk but also encompass situations where the intensity of macroprudential or systemic risk is unchanged but still high. This would make it easier to extend Article 458 measures. Second, as measures mostly address risks with long-term characteristics, the application period for any stricter measure or extension should be extended from two years to three. This would take into consideration the balance between the long-term nature of the risk targeted and the temporary nature of the measure of last resort. In addition, extending the period of application will reduce the burden for all stakeholders.[41] Third, reciprocation of Article 458 measures should be mandatory and subject to materiality thresholds. These should be set in line with the ESRB Recommendation on assessing cross-border effects of and voluntary reciprocity for macroprudential policy measures, follow the calibration guidance provided by the ESRB on operationalising macroprudential policy in the banking sector (chapter 11) and be publicly disclosed on the ESRB website. If needed, the ESRB could consolidate the ESRB recommendation and the guidance in the ESRB handbook mentioned above into a single recommendation. When a national measure is stricter but not available in the national legislation of the host reciprocating Member State, the host authority should reciprocate with another macroprudential policy measure available in its jurisdiction which has an equivalent effect to the Article 458 measure activated. Materiality should also be reflected in the assessment prepared by the Commission and in the opinions provided by the ESRB and the

[40] Article 133 of the CRD does not set limits on the SyRB. Nonetheless, the CRD V provides for an enhanced notification procedure if the combined SyRB rate is at a level higher than 3% and up to 5%, and for the need to seek approval by the European Commission, if this rate is above 5%. Examples of how large the SyRB rate must be to be equivalent to a risk weight floor can be found in selected **ESRB Assessment of notifications in accordance with Article 458 of the CRR**.

[41] Relevant authorities (NCAs or NDAs), the ESRB, the EBA, the Commission and the respective banks.

EBA. All of this would foster a level playing field and financial integration in the EU. Fourth, it should be clarified that hybrid risks such as climate-related financial risk and systemic cyber risk (see Section 5) can also be source for changes in the intensity of macroprudential or systemic risk, if their materialisation endangers the stability of the financial system and the real economy. Fifth, stricter risk weight measures will no longer be an instrument in Article 458 because of the new single risk weight article outlined above.

4 Broadening the regulatory perimeter

4.1 Borrower-based measures

4.1.1 The benefits of including BBMs in EU legislation

Including borrower-based measures (BBMs) in the EU macroprudential framework, if appropriately designed, could have significant benefits. In particular, the aim would be to (i) effectively mitigate systemic risks related to real estate markets, (ii) reduce inaction bias regarding the use of BBMs nationally, and (iii) take a further step towards developing the EU Single Rulebook, facilitating the further integration of the Single Market by enhancing cross-border lending, reciprocity, and the assessment and monitoring of financial stability risks. Notwithstanding the fact that legally binding and non-legally binding BBMs are already applied in most Member States, the inclusion of a common minimum set of BBMs in EU legislation would enhance the EU macroprudential framework by ensuring that a sufficient set of BBMs is available to and useable by the authorities of all Member States to prevent systemic risks building up. Furthermore, this would ensure that all national authorities have legally binding BBMs available if the use of non-legally binding instruments does not ultimately prove effective and efficient. Box A2 (see Annex) summarises the main features of the proposal for including BBMs in EU legislation.

Given the importance of residential real estate (RRE) markets and their financing for financial stability, as well as the strong economic and financial interconnectedness between Member States, there should also be a common minimum basis for the national legal frameworks for BBMs. This would allow for a more effective use of BBMs compared with the use of similar instruments based on divergent national legal frameworks, some of which are incomplete in terms of the instruments available. Moreover, the proposal for including BBMs in EU legislation could increase the transparency and comparability of macroprudential measures across Member States, strengthening overall confidence in those measures. To that end, the EU legal framework should be designed in such a way that it is not in conflict with existing national macroprudential frameworks for BBMs. If that is the case, the benefits are expected to significantly outweigh the associated efforts in terms of the necessary adaptation and transposition at Member State level. By contrast, should the design of an EU framework require changes other than the inclusion of a minimum set of BBMs in the existing national frameworks for BBMs developed over the past decade, this could entail potential additional costs, which would not just be procedural, and which could affect the cost-benefit calculus underlying the proposal.

Evidence shows that one of the main causes of past banking and financial crises has been credit-driven real estate "boom/bust" cycles.[42] RRE markets have recurrently been prone to boom/bust cycles with detrimental effects on financial stability and the real economy. These cycles

[42] See, for example, Reinhart, C. M. and Rogoff, K. S., "**The Aftermath of Financial Crises**", *National Bureau of Economic Research Working Paper Series*, January 2009.

are typically characterised by patterns of reinforcement and procyclical patterns in price developments and risk-taking among lenders and borrowers.[43] RRE busts are common causes of banking crises, reflecting the importance of real estate in the balance sheets of households and credit institutions.[44] Recessions following RRE busts tend to be particularly deep and prolonged, with severe repercussions in terms of consumption, investment and employment.

BBMs can help to ensure sound lending standards and boost borrower resilience, and are therefore necessary complements to capital-based measures. International experience shows that risks to financial stability from developments in RRE markets tend to build up when there is a combination of strong house price growth and housing credit dynamics, and eroding credit standards. BBMs can help mitigate these risks by ensuring minimum credit standards for new housing loans. Therefore, the use of BBMs tends to be associated with lower mortgage credit growth and higher resilience of households (including the most vulnerable households) as well as of credit providers.[45] By reducing the procyclicality of credit, the scale of banking crises and/or their negative economic consequences are reduced. Consumption and investment are less volatile, contributing to a more stable macroeconomic environment and facilitating economic growth in the medium term as, in particular, borrowers are less at risk of not being able to repay or service their debt regularly without significantly reducing their consumption.[46] The value of household wealth is also less likely to experience a sharp decline.

While powers to activate legally binding BBMs are currently completely missing from the legal systems of only two EEA countries, the existing national legal frameworks diverge significantly in the extent to which these measures are available to authorities to mitigate financial stability risks. Legal frameworks for BBMs are currently completely missing in Greece and Poland only.[47] In many countries, the national legal frameworks provide a comprehensive set of legally binding BBMs that national authorities can use to effectively address the vulnerabilities identified. In some other countries (Finland, Germany, Hungary, Liechtenstein, Netherlands and Norway), however, the set of legally binding instruments available to the national authorities is currently insufficient to enable them to effectively mitigate risks from a forward-looking perspective. To ensure that potential financial stability risks can be addressed effectively in future, a comprehensive combination of BBMs related to the collateralisation of RRE loans, as well as borrowers' ability to service and repay such loans, is needed. Furthermore, in many countries, these measures can only apply to RRE lending to natural persons, and cannot be applied to legal persons (Czech Republic, Finland, Hungary, Iceland, Liechtenstein, Latvia, Netherlands and

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43 See, for example, Jordà, O. et al., "**Leveraged Bubbles**", *Journal of Monetary Economics*, 2015.

44 See, for example, Hartmann, "**Real estate markets and macroprudential policy in Europe**", *ECB Working Paper Series*, No 1796, May 2015.

45 See, for example, Poghosyan, T., "How Effective is Macroprudential Policy? Evidence from Lending Restriction Measures in EU Countries", *IMF Working Paper Series,* 2017; Lim, C., et al., "Macroprudential policy: what instruments and how to use them? Lessons from country experiences", *IMF Working Paper Series*, 2011; Abreu, D., and Passinhas, J., "Curb your enthusiasm: the aggregate short-run effects of a borrower-based measure", *Banco de Portugal Economic Studies*, 2021; Cerruti, E. et al., "**The use and effectiveness of macroprudential policies: New evidence**", *Journal of Financial Stability*, 2017.

46 See, for example, Galán, J., "**The benefits are at the tail: uncovering the impact of macroprudential policy on growth-at-risk**", *Journal of Financial Stability*, 2020.

47 In Poland, BBMs have been used as part of supervisory guidance to banks since 2010 (DSTI), 2013 (maturity limits) and 2014 (LTV). Banks have been adjusting following the guidelines in their lending policies in response to changes in the guidance generally.

Slovakia). Importantly, in several countries, either governance issues may lead to inaction bias or the legislation may be less conducive to timely use of the measures.

Limitations to the use of appropriate macroprudential tools across Member States may expose the European economy as a whole to systemic risks in situations where real estate vulnerabilities are the result of common factors, such as low interest rates. In the worst of cases, unaddressed vulnerabilities can materialise in a country and adversely affect the economy, potentially creating spillover effects across the EU.

1. BBMs as effective instruments for mitigating systemic risks related to real estate markets

The proposal to include BBMs in EU legislation could allow for a more effective use of BBMs in mitigating systemic risks related to RRE markets. Fostering the availability and use of BBMs in a timely, broad-based and flexible manner is key to mitigating systemic risks at the national and EU level effectively. The proposal would ensure that a sufficient set of instruments is available to national authorities to mitigate sources of systemic risk. This would make the application of BBMs more effective, and prevent financial stability risks from spilling over across the EU, in comparison with measures based solely on national provisions, which may be incomplete in terms of instruments available and which may also conceptually differ from each other. This appears to be important at the current juncture, when RRE cycles in EU countries seem to be synchronised to a significant extent.[48] In addition to a minimum set of instruments envisaged in EU legislation, Member States should have the flexibility to use additional instruments and to use non-legally binding instruments as they see fit.

The responsibility for the activation and calibration of BBMs should remain at national level: there should be no shift of responsibilities for activating BBMs from the national to the European level. The Commission should envisage which safeguards would be necessary to ensure that the new set of macroprudential powers are used solely at national level, as the proposal to include BBMs in EU legislation is subject to the condition that the ECB's topping-up power does not apply. Therefore, the Commission's legislative proposal to include BBMs in EU legislation should clearly assign the responsibility for activating, releasing and calibrating BBMs to the national level, and explicitly rule out any topping-up powers for European authorities or institutions as regards BBMs. As long as lending markets across the EU are fragmented, BBMs will need to be tailored to national markets and lending practices. To this end, the inclusion of BBMs in EU legislation could follow the principles of "guided discretion", by setting a general framework at the European level but leaving the implementation at national level. In addition, decisions on the activation and release of the measures, as well as about their calibration and any possible exemptions, would be left solely in the hands of national legislators or authorities, which may also have to take into account socio-economic considerations, such as access to the housing market for low-income and first-time buyers.

Including BBMs in the CRD would complement the existing set of macroprudential instruments available to the banking sector and emphasise the financial stability dimension

[48] See "**Vulnerabilities in the residential real estate sectors of the EEA countries**", ESRB Report, February 2022

of BBMs alongside existing capital-based measures. Moreover, the inclusion of BBMs in the Mortgage Credit Directive (MCD) would allow authorities to apply macroprudential BBMs to loans granted by all types of lenders, including insurance companies, investment funds and pension funds, provided that the scope of application of the MCD were also extended to macroprudential aspects. To ensure that BBMs are applied at the same level as capital-based measures, but at the same time extending the scope of BBMs to non-banks and EU branches, it would be advisable to refer to BBMs in both legal texts, the CRD and the MCD. This would not only ensure a level playing field but also prevent regulatory arbitrage. Therefore, the Commission is strongly encouraged to extend the scope of BBMs by also adding a reference to this set of instruments in the MCD, despite the existing differences in the regulatory objectives of the MCD and the CRD. The inclusion of BBMs in the CRD and the MCD should not preclude Member States from applying BBMs not only to RRE loans but also to other consumer loans. To avoid possible circumvention, the Consumer Credit Directive should therefore in principle allow the application of BBMs to consumer loans as well.

BBMs should not be included in the so-called "pecking order" of macroprudential measures in the CRD/CRR. BBMs apply to new loans, depending on borrower or loan characteristics, and have a direct impact on borrowers' resilience. The existing macroprudential measures that are already included in the CRD/CRR (capital buffers and risk weight and other measures) apply to all existing loans or to subsets of existing loans. These measures have an impact primarily on the resilience of lenders. The different applicability of borrower-based and capital-based measures make these two types of instruments complementary, depending on the level and dynamics of the vulnerabilities identified. As a result, BBMs could be activated in isolation, or in combination with other macroprudential measures. Decisions about activating BBMs and having the right mix of borrower-based and capital-based measures in place should follow a careful assessment of the nature and intensity of the vulnerabilities and should be left to the national authorities.

The proposal would not mean imposing uniformity in either the application or design of BBMs across the European Union, given existing differences in real estate markets and different traditions and legal constraints. The EU legal framework should consider only a minimum level of harmonisation when it comes to the design of BBMs, inspired by the principles of subsidiarity and proportionality. Including BBMs in EU legislation would not imply equal definitions or uniform application throughout the European Union. Rather, it would leave sufficient flexibility to address national specificities, including the decision as to whether BBMs should be applied in a given situation via legally or non-legally binding acts. Such flexibility is needed to ensure that BBMs are effective in mitigating systemic risks, as national legal frameworks are better suited to allow authorities to address country specificities, such as social factors, prevailing income types, bank practices, or other regulatory rules such as taxation or covered bond regulation. In line with the principle of proportionality, changes to existing national frameworks would not be envisaged if the frameworks already met the requirements set out in the minimum EU framework. Furthermore, allowing for appropriate transitional periods for transposing EU legislation into national law should avoid negative interference with existing national frameworks. The level of harmonisation to be achieved at EU level would thus remain below the level of harmonisation achieved for capital-based macroprudential instruments. However, to foster more consistency in the use of BBMs, the ESRB could assist by providing guidance to national authorities on the sound and consistent application of

BBMs across Member States, while any policy decision would remain exclusively with those Member States.

2. Reducing potential risks related to inaction bias

Including BBMs in EU legislation could, depending on the final design, reduce risks related to inaction bias potentially associated with the use of national BBMs. Notwithstanding the fact that legally binding and non-legally binding BBMs are already applied by most Member States, the inclusion of some basic common standards for the governance of BBMs in EU legislation should help reduce potential inaction bias and thus contribute to financial stability. Risks to financial stability arise through inaction if the relevant authorities are not able, or willing, to act according to their mandate. Consistent with the broader macroprudential framework, an essential pillar of an effective governance framework for BBMs would be transparency and accountability, which the relevant responsible authorities must ensure. Indeed, it is critical that these authorities are in a position to articulate the benefits, costs and broader effects of BBMs to a range of stakeholders, including governments. Nevertheless, political considerations could be a factor that prevents or delays the appropriate use of BBMs.

Although it would be left to Member States to decide which authority were responsible for activating BBMs, Member States would be strongly advised to entrust the designated or macroprudential authorities with an active role in activating, releasing and calibrating BBMs. For the application of BBMs, it is essential to involve authorities with sufficient experience in addressing financial stability risks stemming from the RRE market. The conferral of tasks related to the monitoring and assessment of financial stability risks posed by RRE markets on macroprudential authorities would be in line with the mandates of national macroprudential authorities as required by the ESRB in its Recommendation on the macroprudential mandate of national authorities (ESRB/2011/3). The additional burden on macroprudential authorities would therefore be limited. The same applies to potentially conferring tasks related to the activation of BBMs on designated/macroprudential authorities. Under EU legislation, designated authorities are responsible for activating capital-based measures, and are thus experienced in applying macroprudential instruments. Furthermore, a legal obligation to publish decisions and in particular the reasoning behind them would not be an additional burden for national authorities, as the established publication channels could also be used by the designated/macroprudential authorities to ensure transparency with regard to the monitoring and assessment of risks to financial stability stemming from RRE markets and with regard to decisions on activating and calibrating BBMs. The ESRB could help develop a framework which provides guidance to national authorities for the assessment of financial stability risks stemming from RRE and which would help promote the sound and consistent application of BBMs across Member States.

In order to address potential risks related to inaction bias, EU legislation could provide a basis for close coordination between national authorities involved in monitoring risks to financial stability and for more transparency when making decisions- about BBMs. Furthermore, regular monitoring of the risks stemming from the RRE market is essential for the supervision of the financial system and preventing systemic risks from building up. In this regard, EU legislation could provide for regular (e.g. annual) assessments of all potential sources of systemic risk stemming from the RRE markets and the need to use BBMs by all institutions involved in decision-making on the activation, release and calibration of BBMs, where necessary for

risk mitigation. The main conclusions from such assessments, which would be conducted by the relevant authorities, should be made transparent, for example as part of a regular financial stability review publication or other dedicated publication. This approach would ensure an in-depth assessment of potential risks to financial stability stemming from the RRE sector and foster accountability in decision-making about BBMs. Responsibility for identifying and assessing potential financial stability risks should therefore be vested in authorities with a macroprudential mandate.

3. Facilitating cross-border lending and mitigation of cross-border risks through reciprocity

Although the proposal to include BBMs in EU legislation is not intended to harmonise BBMs at EU level, this step could lead to a further alignment of national legal systems and reduce the complexity that arises from the multitude of different national legal frameworks across the EU. This would facilitate cross-border lending in the Single Market. However, it is important to acknowledge that the different macroprudential frameworks for BBMs at Member State level are not the main reason for the fragmentation of the banking market for RRE financing within the Single Market: other factors such as differing tax and insolvency proceedings, for instance, are much more relevant. However, a common minimum basis for a legal framework for BBMs could improve transparency for lenders and borrowers, and could thus increase competition among lenders in the internal market. This could ultimately result in lower costs and allow banks to offer broader services to their customers. This would be beneficial not only to banks, but notably also to EU citizens as potential borrowers. This would therefore be a step towards more integrated Single Market and banking union. On the other hand, the absence of common rules for BBMs could contribute to an uneven playing field in the single market.

Reducing the complexity of legal frameworks governing BBMs would also facilitate reciprocation of BBMs and reduce the spillover of risks, ensuring the mitigation of systemic risk at EU level. Therefore, harmonisation of BBMs would also allow systemic risks in the internal market to be more efficiently and effectively addressed. This would also reduce the spillover of risks from cross-border lending among Member States, leading to an overall reduction of risks to EU financial stability.

4. Balancing the costs and benefits of including BBMs in the EU macroprudential framework

The costs associated with including BBMs in EU legislation and subsequently transposing them into national law should be limited to procedural costs. The proposal would not lead to a discontinuation of existing national measures as it does not aim to alter existing national frameworks for BBMs that already include the proposed set of instruments and in principle allow national authorities to activate legally binding instruments. However, some Member States that already have binding BBMs in place would need to adjust their legal frameworks if they do not already provide for the possibility of activating the full set of instruments in a legally binding way. Ensuring transparency of the authorities involved in decision-making on BBMs could be an example of a new procedural feature that could cause additional costs at national level. Although the proposal discussed here is not intended to interfere with existing national provisions and measures in place, this cannot be completely ruled out. Appropriate implementation periods should therefore ensure that the inclusion of BBMs in EU legislation does not have any adverse effects on national

measures already in use. Member States should also be given sufficient time to transpose the new set of instruments included in EU legislation into national law, also to reduce any short-term costs at national level. Any way forward should therefore seek a balance between long-term benefits and short-term costs.

4.1.2 Scope of inclusion of BBMs in the EU legal framework

The minimum common set of BBMs for RRE loans should at least include: limits on loan-to-value (LTV), debt-to-income, debt-service-to-income, and both maturity and amortisation requirements. While this is the minimum set of tools that should be available in all countries, Member States should feel encouraged to go beyond this set of instruments or to offer full flexibility to the respective authorities to use any macroprudential instruments related to the loan or borrower characteristics of RRE loans. Depending on the availability in each country of data on individual borrowers and their overall debt in each country, making limits to loan-to-income (LTI) and loan service-to-income (LSTI) available in the national toolkit for BBMs should be considered.

At the very least, a legal basis for the minimum common set of BBMs should be established at the EU level and transposed into national law so that they can be activated individually or in combination if deemed necessary for macroprudential purposes.[49] To avoid circumvention of the measures via top-up loans, increasing the indebtedness of mortgagors, EU legislation should allow national legal frameworks to include the possibility of applying BBMs when other new loans are taken out. Broader applicability of BBMs can avoid circumvention of the measures and prevent increasing the indebtedness (and therefore vulnerability) of households with a mortgage loan, which could lead to RRE risks materialising. In relation to the LTV limits, countries might consider making the measures applicable when new loans related to RRE acquisition or construction are taken out, including both secured and unsecured loans. In relation to the income-related instruments, for example, countries might consider making the measures applicable when new RRE loans, as well as any other subsequent new loans, are taken out by borrowers who already have an outstanding RRE loan.

EU legislation should also allow for the possibility to make BBMs applicable to loans provided to legal persons. This would prevent the transfer of risks from the household to the investor sector, ensure a level playing field for households with respect to other players on the housing market and mitigate additional fuelling of the RRE market by legal persons who acquire residential properties as investments. So far, BBMs have mostly been applied to natural persons only. This means that the measures can be circumvented by, for example, creating a small company to purchase buy-to-let property. In addition, households can face more regulatory constraints than legal persons when it comes to financing real estate which is ultimately used for housing purposes. To avoid this and make BBMs more effective and efficient as a result, EU legislation should allow national legal frameworks to extend the application of BBMs to legal persons. The inclusion of loans taken out by legal persons to acquire property that is ultimately used for housing purposes should be considered on the basis of an assessment of risks to financial stability.

[49] Including loans related to the purchase of existing or construction of new RRE property.

Extending BBMs to CRE loans in general is not warranted in EU legislation at this stage, despite the higher risks that can be associated with these loans. Commercial property is characterised by higher price volatility, which increases the risk that collateral values would be insufficient to cover the outstanding value of the debt upon a borrower's default. In addition, borrowers' liability may be limited, which further increases the risk of credit providers incurring credit losses. At the same time, however, CRE financing is more complex and heterogeneous. The ESRB Recommendation on closing real estate data gaps[50] put forward definitions of BBMs for CRE loans, which can be further developed to suit the needs of practical implementation. However, owing to the heterogeneity and complexity of CRE financing and scarce practical experience in applying BBMs to CRE loans, any extension of BBMs to CRE loans should be preceded by conceptual work on designing such measures and facilitating their use. Until such tools are developed for CRE, the focus should remain on harmonising BBMs for the RRE market only.

Extending BBMs to other loans to non-financial corporations (NFCs) beyond real estate loans is also not warranted in EU legislation at present. Given that other loans to NFCs are typically not secured by real estate, there is less "value added" in using BBMs for these types of loans than there is in using capital-based measures, as this cannot be used to lean against the property price cycle. In addition, because other NFC loans are even more heterogeneous than CRE loans, imposing BBMs on them would be even more challenging.

Applying BBMs to all lenders would help reduce the risk of leakages due to credit provision by non-bank financial institutions and thus help ensure a level playing field.[51] Therefore, there are good reasons not to limit the regulatory reform of macroprudential tools to the CRD/CRR. If the MCD contains provisions that are similar to BBMs (e.g. requirement to properly assess borrowers' ability to repay RRE loans), these could be developed into a comprehensive set of BBMs to be used both for consumer protection and for mitigating financial stability risks emanating from any type of mortgage lender. Currently, BBMs have been established in an activity-based manner only in a minority of countries (Belgium, Czech Republic, Germany, France, Hungary, Ireland, Iceland, Lithuania, Netherlands, Norway, Sweden and Slovakia). Including BBMs in the MCD would represent a significant step towards activity-based regulation at EU level. Furthermore, Member States would not be precluded from applying BBMs to other types of loans granted to borrowers, e.g. to consumer loans (see Section 4.3), as well.

The ESRB stands ready to work on facilitating the use of BBMs for CRE loans and other loans to NFCs, as well as on finding ways to further develop activity-based regulation. Both streams of work would make the use of the macroprudential framework more effective and efficient. The results of such an investigation could be discussed in the context of the next review of the macroprudential framework, which is due by 2027.

Including BBMs in EU legislation could be complemented with further harmonisation of the definitions related to RRE and CRE loans that are used for monitoring risks under the current EU reporting framework. Currently, some of the reporting requirements at EU level use definitions which are consistent with the ESRB Recommendation on closing real estate data gaps,

50 See **Recommendation of the European Systemic Risk Board of 31 October 2016** on closing real estate data gaps (ESRB/2016/14) (as amended by Recommendation ESRB/2019/3).

51 See "**Macroprudential policy beyond banking: an ESRB strategy paper**", ESRB, July 2016.

while others use different (previously set) definitions. Harmonising the definitions used in EU reporting would therefore reduce costs to lenders and help monitor RRE risks to financial stability across Member States, fostering further development of BBMs as an effective and efficient tool for addressing vulnerabilities stemming from the real estate markets. This would facilitate decision-making on the activation, release and calibration of BBMs. There is a precedent here: the inclusion of a common definition for non-performing exposures in the CRR is not only a successful example of a step towards more transparency and comparability in the single market, but also shows that harmonisation of definitions is fundamentally beneficial. Such a harmonisation of definitions should be based on the ESRB Recommendation on closing data gaps (ESRB Recommendation 2016/14 as amended by ESRB Recommendation 2019/3), which provides for a comprehensive set of indicators for monitoring risks to financial stability and their definitions. The assessment of compliance carried out by the ESRB in 2021 has shown that addressees collect and monitor data in compliance with the above-mentioned Recommendation. Nevertheless, further work needs to be done on closing the remaining data gaps, especially in relation to the CRE loans. This could be done by further developing and improving data collection through AnaCredit or other credit registers.

Member States should be able to continue using different indicators for the purpose of activating or calibrating BBMs if that is necessary owing to national specificities. Member States should be encouraged to follow the definitions set out in the ESRB Recommendation as closely as possible, without legally forcing them to align the national definitions with the detailed definitions included therein. In particular, countries should be able to continue collecting more detailed data which suits the national definitions of BBMs.

Harmonisation should also extend to other areas without interfering with national responsibilities for activating, designing and calibrating BBMs. In particular, EU legislation could provide for annual assessments and the publication by national authorities of the main findings of those assessments. In addition, EU legislation could also set out the framework for certain procedural aspects, such as information obligations, and the obligation to include an explanation as to why measures are considered suitable, effective and proportionate in terms of addressing the situation. This level of harmonisation would make reciprocation at the EEA level easier. These processes should be designed to be as streamlined and efficient as possible in order to minimise any unnecessary administrative burden.

4.2 Systemic liquidity

Systemic risk stemming from the liability side of banks' balance sheets, as well as the balance sheets of non-bank financial intermediaries such as investment funds, i.e. short-term funding which has to be rolled over, remains high on the macroprudential agenda, even if more experience might be needed before introducing new harmonised instruments at EU level. The ESRB report on macroprudential policy issues arising from the low interest rate environment identified a need to work on policies to address systemic liquidity risk.[52] At the same

[52] See "**Lower for longer – macroprudential policy issues arising from the low interest rate environment**", ESRB Report, June 2021.

time, measuring systemic liquidity risks is difficult and subject to data quality and methodological issues. In addition, there is still little experience with this type of instrument and more experience might be warranted before additional tools could be calibrated and implemented at EU level.

In the banking sector, the net stable funding ratio (NSFR) and the liquidity coverage ratio (LCR) aim to reduce risk stemming from maturity mismatches and the lack of high-quality liquid assets. However, the requirements focus on individual banks without taking into account the systemic dimension of liquidity risk, such as interconnectedness and contagion, suggesting a possible need for new macroprudential liquidity instruments. In addition, Article 458 of the CRR allows for the application of macroprudential modifications to these instruments, for instance, a time varying NSFR or LCR. The ESRB Handbook on macroprudential liquidity instruments provides guidance on how to operationalise national macroprudential liquidity instruments.[53]

With respect to liquidity regulation, the legislation could further clarify that the CRD/CRR package regulates LCR and NSFR only, and does not prohibit additional liquidity instruments when they are justified by systemic liquidity risks. At the moment, macroprudential authorities generally have no power to impose requirements relating to funding instruments, such as repos, swaps, and other instruments with very short maturities.[54] As such powers could be conducive to increasing loss absorbency in going and gone concern and to limiting contagion, consideration could be given to adding them to the macroprudential toolbox.[55] Belgium[56], Hungary[57] and Portugal[58] are examples of countries in which such powers have been introduced at national level.

Consistent macroprudential definitions of high-quality liquid assets (HQLA) would be beneficial in terms of ensuring a coherent system-wide analysis of liquidity vulnerabilities. The liquidity vulnerabilities of banks and non-banks differ and should be analysed taking into account their business models and the different nature of their assets and liabilities. However, sources of liquidity should be consistently defined across sectors, ensuring that only those assets that are effectively liquid at all times are regulatorily defined as liquid.[59] The EBA is developing a report to the European Commission on appropriate uniform definitions of high and extremely high liquidity as well as the credit quality of transferable assets. In several of its publications[60] ESMA has

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53 See **The ESRB Handbook on Operationalising Macro-prudential Policy in the Banking Sector**, Chapter 5, "Liquidity instruments", 2014.

54 Macroprudential authorities do have the option to implement stricter liquidity requirements under Article 458(2)(d)(iii) of the CRR.

55 This expansion of the toolkit should happen in a manner that avoids fragmentation and overlaps with existing liquidity tools in the single rulebook, while minimising the risk of circumvention.

56 See Article 36/34 § 1 (10°) of the **law of 22 February 1998 establishing the organic statute of the National Bank of Belgium** with regard to the macroprudential instrument offering the possibility of imposing compliance with a minimum funding requirement. It is partly motivated by the aim to ensure a sufficient amount of those liabilities that can absorb losses in gone concern without leading to contagion or loss of confidence effects. The minimum funding requirement could be applied to credit institutions and stockbroking firms established under Belgian law.

57 See Article 34 of the **Act CXXXIX of 2013 on the Magyar Nemzeti Bank** in the form of rules pertaining to maturity and currency mismatches in banks' balance sheets.

58 Banco de Portugal implemented a loan-to-deposit ratio to address excessive maturity mismatch and market illiquidity.

59 See "**Lower for longer – macroprudential policy issues arising from the low interest rate environment**", ESRB Report, June 2021, Section 4.1.3.3.

60 See the section entitled "Measuring the Shadow banking system - a focused approach", in **Report on Trends, Risks and Vulnerabilities No.2**, ESMA, 2015 and "**Stress simulation for investment funds**", *ESMA Economic Report*, 2019.

used a consistent definition of HQLA when analysing potential liquidity shortfalls of investment funds. On insurance, the ESRB has also suggested using a consistent definition when assessing the liquidity risks stemming from the liabilities of insurers.[61] In this regard, EIOPA works under a definition of liquid assets that is aligned with the International Association of Insurance Supervisors (IAIS) and ESRB publications. Using consistent – but not necessarily identical – definitions would help in analysing the stock of HQLA held across all sectors and would be a step towards measuring liquidity risks system-wide. Such definitions, however, should be regularly reviewed as the liquidity of assets may change over time, possibly also owing to structural developments.

Procyclical margin and haircut requirements might also increase systemic liquidity risks, particularly affecting banks' most active derivatives markets, both in the cleared and uncleared segments. Initial and variation margins typically have to be provided in the form of cash and other liquid assets. Margin calls may occur in periods of high volatility, hence exacerbating liquidity needs in times of market stress when liquidity tends to be scarcer. The March 2020 market stress resulted in large margin calls in derivative markets (**Figure 9**). Central bank interventions proved crucial to limiting fire sales, while central bank reserves became a more important source of liquidity both in absolute and relative terms.[62] The ESRB is carrying out work on margins and haircuts[63] and has published a recommendation on liquidity risk arising from margin calls (ESRB 2020/06)[64]. ESMA is also reviewing anti-procyclicality requirements for central clearing counterparties (CCPs) as laid down in the European Market Infrastructure Regulation (EMIR). Further policy measures to mitigate the procyclicality of margins and haircuts should focus on increasing transparency as well as on improving the liquidity preparedness of clearing members, among which banks are of key importance.

Macroprudential and supervisory authorities need to be better prepared to monitor, prevent and address systemic liquidity risks. Money market funds (MMFs) are an important source of wholesale funding for the banking sector and episodes of illiquidity in these institutions may quickly spill over to the banking system through that funding channel. Reliance on such funding from MMFs may not be sustainable under stressed market conditions, as witnessed in March 2020 when investors used MMFs as a source of liquidity. An abrupt withdrawal of MMF funding to banks may lead to market disruptions that could spill over to other parts of the financial system and the non-financial corporate sector. As proposed in the ESRB's report on macroprudential policy issues arising from the low interest rate environment,[65] liquidity reporting on an entity-based level and datasets at a transaction level should be better aligned and harmonised, in order to monitor liquidity flows at the scale of the EU financial system. Second, liquidity risks should be analysed using system-wide liquidity stress tests. Third, a range of tools which could mitigate identified risks while avoiding unintended consequences could be considered. In particular, regulation is needed

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61 See "**Enhancing the macroprudential dimension of Solvency II**", ESRB, December 2020, pp. 74 et seq.

62 See "**Consultative report, Review of margining practices**", BCBS-CPMI-IOSCO, 2021.

63 The ESRB's 2020 "**Report on mitigating the procyclicality of margins and haircuts in derivatives markets and securities financing transactions**" put forward six policy proposals to help mitigate procyclicality in the practice of central and bilateral margining.

64 See **Recommendation of the European Systemic Risk Board** of 25 May 2020 on liquidity risks arising from margin calls (ESRB/2020/06) (OJ C 238, 20.7.2020, p.1).

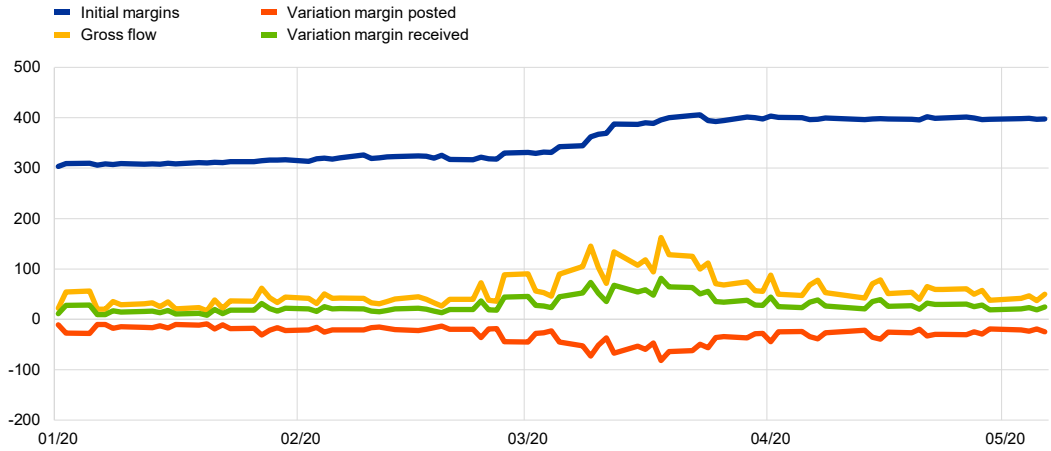
65 See "**Lower for longer – macroprudential policy issues arising from the low interest rate environment**", ESRB Report, June 2021.

throughout the financial system to ensure that liquidity is managed system-wide in a sustainable manner. Sector-specific (both banking and non-banking) microprudential liquidity constraints might increase the probability of system-wide liquidity runs. It will be important to assess the impact of potential regulatory changes on the sustainability of the business models of the financial entities to which these requirements are applied. Finally, given the global dimension of the issue, international coordination and cooperation are essential.

Figure 9

Initial and variation margins posted in four EU and UK CCPs

(EUR billions, latest observation May 2020)



*Source: "**Liquidity risks arising from margin calls**", ESRB Report, June 2020.*
Notes: The chart includes data for the largest four CCPs (in terms of initial margins) in the EU and United Kingdom vis-à-vis their respective clearing members. The latest observation is for 7 May 2020. The chart shows a comparison of initial and variation margins posted and received at the four largest CCPs in the EU and the United Kingdom by initial margins (clearing members from all jurisdictions are included in the aggregates). "Gross flow" proxies the total amount of liquidity flowing from clearing members to the CCPs plus the amount from the CCPs to the clearing members until the end of the day. "Variation margin received" by the CCPs proxies the amount of clearing members' cash liquidity needs. "Variation margin posted" by the CCPs proxies the amount of cash liquidity received by clearing members. The share of variation margin posted by the CCPs resulting from intraday margin calls reflects the liquidity subject to a delayed pass-through for some CCPs. The results for each CCP have been validated with national sources. The methodology has been developed in cooperation with the Deutsche Bundesbank.

4.3 Bank-like activities of non-banks

From a macroprudential perspective, a growing non-bank financial sector brings benefits in terms of increased risk-sharing across the financial system. However, it can also result in new risks and vulnerabilities.[66,67] The non-bank financial intermediation sector has grown strongly in the aftermath of the global financial crisis (**Figure 10**), in some cases providing bank-like

[66] See **EU Non-Bank Financial Intermediation Risk Monitor 2021**, ESRB, August 2021.

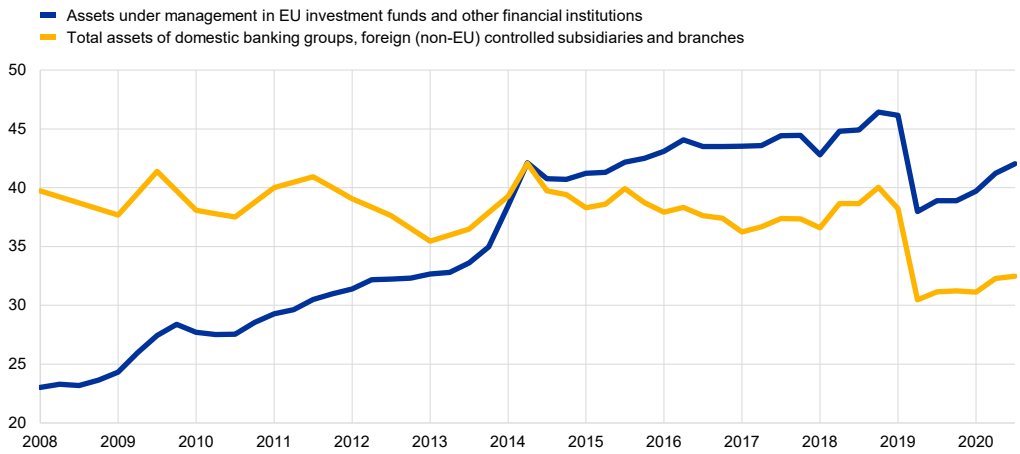
[67] See "**Will video kill the radio star? – Digitalisation and the future of banking**", ASC Report, ESRB, January 2022. The early 20th century saw the rise of investment banks to fund railroad expansion in the United States, while the 1960s saw the rise of money market funds in the United States in response to Regulation Q, which prevented banks from paying interest on demand deposits.

financial services. In addition, digitalisation has brought new intermediaries in the form of, for example, peer-to-peer lending platforms or new payment service providers. It has also accommodated non-financial companies entering the financial service market (e.g. Amazon, Facebook, etc.). The entry of new institutions and the use of new financial products, some of which have quickly gained popularity (e.g. crypto assets, stablecoins, etc.), has the potential to pose risks to financial stability. This expansion of the non-bank financial sector in recent years has diminished, at least marginally, the role of banks as providers of financial services to the real economy, allowing for risks to be diversified across different types of financial institutions. But it has also been accompanied by an increase in liquidity transformation and maturity transformation, combined with a pick-up in leverage for some entities.

Figure 10

Total assets of EU banks and assets under management of EU investment funds and other financial institutions

(EUR trillions, latest observation Q2 2021)



*Source: **"Will video kill the radio star? – Digitalisation and the future of banking",** ASC Report, ESRB, January 2022.*
Notes: The blue line represents assets under management of EU investment funds and other financial institutions, as reported in the 2020 Non-Bank Financial Intermediation Risk Monitor. Data on the size of the banking system are taken from consolidated banking data, including from domestic banking groups, stand-alone banks and foreign (non-EU) controlled subsidiaries and branches, irrespective of their accounting framework. Consolidated banking data have been reported quarterly only since 2015, so linear extrapolation has been used for values before that year. Both time series end in 2019 to keep a constant sample of EU countries.

At the same time, if the new landscape involves certain key financial services being concentrated in a few BigTech companies, these could become new too-big-to-fail players and an additional source of systemic fragility. Such a risk can arise either when BigTech companies serve purely as platforms or when they go directly into intermediation if the provision of a significant share of essential services involves their participation. Further, in the platform economy, disruption and winner-takes-all dynamics can lead to the rapid collapse of a platform in favour of another, which involves risk during the process of transition.

The principle of "same activities, entity-specific risks, consistent rules" could provide guidance for reforming the EU macroprudential framework in order to ensure congruent

regulation.[68] The goal of congruent regulation would be the avoidance of regulatory arbitrage as well as the transfer of risks to unexpected or less regulated parts of the system. At the same time, technological innovation should be encouraged. Where non-banks conduct bank-like activities, such as offering lending, deposit-taking or payment services, an assessment of entity-specific risks and sectoral legislation, as well as of opportunities for regulatory arbitrage, should be conducted. The outcome could either be that congruent regulatory rules should be implemented, or that activities should be adjusted accordingly.

Approaching new macroprudential tools from an activity-based perspective, complementing the entity-based perspective, could be a way of ensuring the resilience of the whole system.[69] Macroprudential tools specifically designed for banks cannot be applied one-to-one to non-bank financial institutions, even when they are exposed to the same type of risks. This is because the business models and balance-sheets of non-banks are different. As analysed in the ESRB Advisory Scientific Committee's report on regulatory complexity[70], given the recent evolution of the financial system, in which financial institutions have in some cases expanded their range of activities, it may be advisable to ensure a consistent treatment of certain risks across the financial system, as a complement to the existing entity-based regulation. A way for macroprudential tools to also cover non-banks would be to design activity-based tools which would then be applicable to various groups of financial institutions and which would complement existing entity-based regulation.

A first area in which to try to apply the approach of activity-based tools would be BBMs. One example for macroprudential tools beyond banking are those that the ESRB has proposed for insurers, in view of the Solvency II 2020 Review.[71] These include BBMs when insurers engage in mortgage lending.[72] In its response to the Solvency II review EIOPA considers that a capital surcharge could be applied where insurers are involved in certain types of activities that are more prone to creating systemic risk.[73] This reflects the need to ensure consistency in macroprudential policy across the financial sector. In a number of countries, but not all, the legal scope of BBMs already includes insurers.[74] BBMs targeted at the borrower level could in principle address all types of lending, independent of the institutional entity of the lender. The inclusion of BBMs in the Mortgage Credit Directive (MCD) could thus avoid loopholes both in terms of entity and types of credit; furthermore, national legal frameworks should not be precluded from applying BBMs to other consumer loans as well (see Section 4.1).

A second example is the ESRB Recommendation on Money Market Funds (MMFs)[75], which aims to eliminate the deposit-like features of certain MMFs, as they are not regulated like

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68 See Metrick, A, and Tarullo, D.K., "**Congruent financial regulation**", March 2021

69 The ESRB already conducts activity-based monitoring, complementing entity-based monitoring and thereby ensuring a more holistic understanding of financial stability risks related to non-bank financial intermediation.

70 See "**Regulatory complexity and the quest for robust regulation**", ASC Report, ESRB, June 2019.

71 See **ESRB Response Letter to a Consultation of the European Commission on the review of Solvency II**, October 2020.

72 See **ESRB Letter to Members of the European Parliament on the Solvency II Review**, February 2022.

73 See **Opinion on the 2020 Review of Solvency II**, EIOPA-BoS-20/749, 17 December 2020.

74 See "**Enhancing the macroprudential dimension of Solvency II**", ESRB Report, February 2020, Chart 28, p.106.

75 See **Recommendation of the European Systemic Risk Board** of 2 December 2021 on reform of money market funds (ESRB/2021/9).

banks. Certain private debt MMFs, known as “low volatility net asset value”, can keep a stable net asset value under certain conditions. This means that they can offer redemption at par and provide a service which is similar to bank deposit-taking. They are, however, not subject to capital requirements which would allow them to absorb market losses and continue to provide this service in all market conditions. The ESRB has recommended that the Commission reduce the features that make MMFs similar to deposit-taking institutions and to increase the features that render MMFs similar to other investment funds. Concretely, all private debt MMFs should have a fluctuating net asset value.

In the longer term, a dedicated macroprudential code, where a macroprudential framework is provided for the entire financial system, would have several advantages. While the European Commission’s recent call for advice on their 2022 review of the macroprudential framework for the banking sector is as such limited to the banking framework, it may be beneficial in the longer term to have a dedicated macroprudential regulatory framework, which covers the entire financial system, set out. This would cover all types of systemic risk independently of which entity is exposed to them. It would also be helpful to avoid gaps, inconsistencies or overlaps between different legal frameworks. This should be taken into account when reviewing other regulatory frameworks, such as Solvency II or digital finance.

5 Macroprudential tools to address hybrid risks in the next decade

5.1 Systemic cyber risks

The impairing effect of cyber incidents on the financial system's operability adds a new dimension to macroprudential policy. A cyber incident's impact on financial stability depends to a large extent on the duration and scale of operational disruptions. The long-lasting or frequently occurring unavailability of operational systems that provide critical economic functions could result in direct financial losses or trigger an erosion of confidence, posing a threat to financial stability. The ESRB recommends establishing a pan-European systemic cyber incident coordination framework (EU-SCICF) to strengthen coordination among financial authorities in the European Union, as well as with other authorities in the Union and key actors at international level.[76]

To mitigate systemic cyber risk at an early stage, the macroprudential framework needs to be expanded to encompass cyber resilience and thus beyond financial resilience alone.[77] Equally, the existing microprudential and oversight approach on cyber resilience would need to be reinforced by adding a systemic dimension.[78] To fully address the systemic risk-related amplification or contagion channels associated with a cyber incident, the focus would need to be on the specific parts of the financial system that are systemic by nature.

The macroprudential approach on systemic cyber risk needs to be applied beyond banks. Systemic cyber risk is perceived as a structural risk that any entity providing services in or to the financial system is exposed to. Consequently, the macroprudential mandate needs to be expanded beyond credit and other financial institutions to include third-party providers, as is also foreseen for microprudential authorities in the forthcoming Digital Operational Resilience Act (DORA).[79]

A new set of macroprudential tools is required to address systemic cyber risk. Existing macroprudential tools are not designed specifically to manage the impact of a cyber incident and thus have limited capability to serve as systemic cyber risk mitigants. While greater financial resilience in the financial system contributes to its loss absorbing capacity in the event of a cyber incident, the corresponding tools are applied relatively late in crisis mitigation. The operational dimension of systemic cyber risk would remain unaddressed, which calls for specific macroprudential tools on cyber resilience. Of particular use are macroprudential tools which contribute to preventing the cyber incident`s impact spilling over from the operational to the financial level or affecting confidence in the financial system. The overall objective of this new set of

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76 See **Recommendation of the European Systemic Risk Board of 2 December 2021** on a pan-European systemic cyber incident coordination framework for relevant authorities (ESRB/2021/17).

77 See "**Mitigating systemic cyber risk**", ESRB Report, January 2022.

78 See "**Flagship report on macro-prudential policy in the banking sector**", ESRB, 2014, Table 4.

79 See the **European Commission Proposal** on a Digital Operational Resilience Act (DORA), 2020.

macroprudential tools is to ensure the provision of critical economic functions even in severe cyber incident scenarios.

New macroprudential tools could be included in the CRD/CRR or in the forthcoming DORA. It is important to avoid gaps, so that all the regulatory needs described below can be addressed.

Entity-based tools aim to achieve a higher level of cyber resilience of systemically important institutions compared with others. In the financial system, critical economic functions are to a large extent provided by systemically important institutions or critical/core financial infrastructures and are to an increasing extent supported by third-party service providers of information and communication technologies (ICT).[80] This can lead to dependency on third-party providers and concentrations across the value chain, such that ICT third-party providers might also become systemically important for the financial system.[81] To mitigate contagion effects, systemic entities might need to operate with increased levels of cyber resilience,[82] on which macroprudential authorities can provide guidance based on their definitions of tolerance for disruption. For the sake of proportionality, the application of stricter requirements might focus on G-SIIs and O-SIIs whose designation framework is based, among other aspects, on the substitutability of the services or of the financial infrastructure provided by the group. To avoid regulatory arbitrage, stricter cyber resilience requirements might also be applied to other systemically important nodes in the system, like third-party providers which will be designated under DORA.[83] In addition, operational concentration risks to systemically important third-party providers need to be addressed to mitigate related contagion effects. Operational diversification can be a tool for mitigating concentration risk and can be implemented through a requirement for a multi-vendor strategy, in which services are replicated across more than one provider.[84] Other forms of stricter cyber resilience requirements could be more appropriate if those third-party providers are not substitutable.

Activity-based tools aim to make operational systems providing critical economic functions cyber resilient. The objective of these tools is to ensure the timely recovery of operational systems which mitigate contagion related to cyber incidents. This work could build on existing microprudential and oversight authorities' initiatives in the area of tolerance for disruption. For instance, banks define their operational resilience expectations taking into account their risk appetite, risk capacity and risk profile.[85] Macroprudential authorities could provide guidance to financial entities by defining their expectation as to a maximum acceptable level of disruption to critical economic functions which would not pose a risk to financial stability in severe, or even extreme but still plausible scenarios. Under Pillar 2, consideration could be given to how banks'

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80 See **Financial Stability Review**, ECB, May 2021.

81 See "**Cyber-resilience: Range of practices**", Basel Committee on Banking Supervision, 2018.

82 Against this background, the International Monetary Fund (IMF) has concluded that "… smaller and lower-capacity firms should focus on strengthening cyber hygiene, and the largest and most globally connected firms and key system nodes should be subject to heightened standards commensurate with their size, scale, interconnectedness, and risk profile." See "**Cybersecurity Risk Supervision**", IMF, 2019.

83 See also "**Cyber resilience practices – Executive Summary**", Financial Stability Institute, Bank for International Settlements, 2021.

84 See "**Third-party dependencies in cloud services – Considerations on financial stability implications**", Financial Stability Board, December 2019.

85 See "**Principles for Operational Resilience**", Basel Committee on Banking Supervision, 2021.

cyber resilience is aligned with macroprudential authorities' expectations. Such an approach would reinforce existing initiatives by adding a systemic dimension to them.

As a sensible first step, macroprudential authorities need to expand their systemic cyber risk monitoring so that adequate mitigants can be developed, calibrated and activated. Macroprudential authorities need to develop cyber resilience scenario stress tests. These exercises provide insights into the financial system's operational capacity to absorb the shock stemming from a cyber incident in "what if" scenarios. Benchmarking exercises test results against institutions' and macroprudential authorities' tolerance for disruption, while cyber resilience scenario stress tests aim to reveal cyber risk-related vulnerabilities in the financial system. Consistent with other stress tests, the ESAs, in cooperation with the ESRB, should be responsible for developing the narratives, scenarios and impact tolerances and for identifying systemic firms to conduct the tests. For the sake of proportionality, these cyber resilience scenario stress tests should be focused on systemically important institutions.

Timely and high-quality data are important for systemic cyber risk monitoring, instrument calibration and ex-post management of systemic cyber crises, both in terms of defining recovery strategies during the immediate impacts and for improving recovery plans. As proposed in DORA, data collection initiatives should be supplemented by an information-sharing framework between authorities, including macroprudential ones, to overcome the lack of data at macroprudential level and facilitate risk assessment across jurisdictions and sectors.

5.2 Climate-related financial risks

The systemic nature of climate-related financial risks (CRFR) is widely acknowledged, and numerous initiatives – in particular stress-testing – are being developed to better monitor and quantify their impact on the financial system. Central banks and supervisors have been combining efforts both at the international and European level to better measure and model the potential impact of CRFR on the financial system.[86] Work by the ESRB and the ECB, in particular, has been maturing as its broad membership works toward the measurement and modelling of climate related risk to financial stability.[87]

While an analysis of how the microprudential framework can account for idiosyncratic risks linked to CRFR is under way, complementary macroprudential policy options are needed to address the systemic aspects of climate risk. The Basel Committee on Banking Supervision (BCBS)[88] and the EBA[89] are working on adequately capturing CRFR in the banking regulatory

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86 See, for instance, "**A call for action Climate change as a source of financial risk**", Network for Greening the Financial System, First comprehensive report, April 2019, and "**Positively green: Measuring climate change risks to financial stability**", ESRB Report, June 2020. In that context, see also the European Commission's **Strategy for Financing the Transition to a Sustainable Economy**.

87 See "**Climate-related risk and financial stability**", ESRB Report, July 2021.

88 The BCBS has set up a Task Force on Climate-related Financial Risks (TFCR), which is charged with contributing to the Committee's mandate of strengthening the regulation and supervision of banks worldwide and ensuring that banks are better prepared to address risks related to climate change. The TFCR workplan includes three workstreams to assess each pillar of the Basel Framework: the regulatory framework; supervisory review process and practices; and disclosure requirements.

framework, and ESG (environmental, social and governance) risks more generally. Beyond idiosyncratic risks, macroprudential policy should provide options for dealing with the system-wide impacts of CRFR. Macroprudential policy is thus complementary to microprudential policy and provides an additional layer in ensuring the stability of the financial system as a whole. The importance of adopting a preventive approach by building up resilience in good times also supports a role for macroprudential policy when dealing with CRFR. Indeed, macroprudential policy has the objective of helping safeguard the stability of the financial system by both preventing the build-up of vulnerabilities and strengthening the resilience of the system through pre-emptive interventions. Therefore, it is crucial to have tools at our disposal in advance, and as unlike minimum requirements, macroprudential buffers are meant to absorb unexpected or exogenous losses and to help sustain lending provision under stress conditions.[90]

The potential systemic impacts of CRFR, as well as their unique and complex features, justify macroprudential action to both reduce the build-up of systemic risks related to climate change, and strengthen the resilience of the financial system to those risks. Owing to its unpredictability, irreversibility, tipping-points and long-term horizon, climate change can contribute to the build-up of systemic risks. The uncertainty and the long-term horizon of CRFR mean that they are not being adequately priced by financial markets.[91] They can be amplified by classic systemic risk externalities such as financial system-wide common exposures and portfolio correlations, as well as spillovers and second-round effects across the financial system and the real economy. Moreover, as concluded by the 2021 report of the ESRB/ECB project team on climate risk monitoring, CRFR show a high concentration in specific sectors, geographies and firms. For instance, around 30% of euro area banking system credit exposures to non-financial corporations are to firms exposed to high or increasing risk owing to at least one physical risk driver.[92] Finally, the assessment of the impact of CRFR on the financial system and the real economy needs to account for the interplay between credit institutions and insurers. As climate change risks intensify, insurance provision may be impaired or become more expensive, increasing the exposures of households and (financial) corporations to physical risk.

The assessment of how the macroprudential toolkit could tackle climate-related systemic risks is still in its early stages. Ongoing work is focusing on applying a growing body of analysis to underpin policy. Recent work by the ESRB and the ECB has turned towards developing an evidence-based view of macroprudential aspects. It focuses on how current macroprudential tools can limit the build-up of systemic financial risks linked to climate change, and increase the resilience of the financial system and notably the banking sector to these risks.[93] This includes reflecting on intermediate macroprudential policy objectives as well as assessing the pros

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89 Under Article 98(8) of the Capital Requirements Directive (CRD V) and Article 35 of the Investment Firms Directive (IFD) EBA is responsible for developing a report providing uniform definitions of ESG risks, and appropriate qualitative and quantitative criteria (including stress tests and scenario analyses) to assess the impact of ESG risks on the financial stability of institutions in the short, medium and long term. The EBA is notably working on recommendations for the incorporation of ESG risks into the governance, risk management and supervision of credit institutions and investment firms.

90 See De Guindos, L., "**Macroprudential policy after the COVID-19 pandemic**", Panel contribution at the Banque de France / Sciences Po Financial Stability Review Conference 2021, 5 March 2021.

91 See "**Positively green: Measuring climate change risks to financial stability**", ESRB Report, June 2020.

92 See "**Climate-related risk and financial stability**", ESRB Report, July 2021.

93 See, for instance, "**Climate-related risks and opportunities**", *Macroprudential Bulletin*, Issue 15, ECB, October 2021.

and cons of each macroprudential tool in addressing the specificities of CRFR in their systemic dimension. The ESRB's work has taken into account work under way at the international level, such as that of the BCBS and the Financial Stability Board (FSB), to better measure and model CRFR, while assessing the adequacy of the current prudential policy framework.[94]

Preliminary findings indicate that the systemic risk buffer and large exposure limits could be relevant tools for addressing the systemic aspects of CRFR. First, the systemic risk buffer (SyRB) as currently defined in Articles 133 and 134 of CRD V may also be used to address systemic CRFR. It can be applied to sectors defined by the nature of the debtor or of the exposure, or by the type of collateral, and to subsets of these sectors, or to geographical areas.[95] It appears feasible to apply a sectoral SyRB to increase resilience against environmentally harmful exposures by targeting carbon-intensive debtors and economic sectors. For this purpose, criteria for identifying economic sectors or asset classes that could be exposed to CRFR need to be further developed. Moreover, to be efficient this option would necessitate close coordination between European countries for setting a SyRB, in addition to a need to extend the sectoral SyRB to third country exposures. Second, large exposure restrictions could be imposed for macroprudential purposes to limit excessive exposures towards physical and/or transition risk, under the remit of Article 458 of the CRR (see Section 3.2.2). Clarification as to how to group clients based on CRFR exposures may be required. If this proves too complex, an alternative option could be the creation of a new concentration limit standard targeting exposures to CRFR. These tools have the advantage of limiting the build-up of CRFR without requesting financial institutions to set aside additional capital, and they have been suggested by some supervisory authorities (such as the Prudential Regulation Authority in the United Kingdom).

New macroprudential tools such as concentration charges may also complement supervisory measures and allow for more targeted reductions in the build-up of systemic risks. In general, capital-based macroprudential measures could increase banks' resilience to climate risks but would require careful calibration to balance their limitations on banks' available capital space and impact on funding transition. More generally, macroprudential options to account for CRFR must be evidence-based, and although the recent advances in empirical understanding of risks already provide a valuable foundation, further work needs to be done to assess how existing macroprudential tools might be adapted.

The use of macroprudential tools to address CRFR must go hand in hand with the reduction of climate data gaps, as well as the development of harmonised and granular taxonomy and metrics. Indeed, the calibration of macroprudential tools based on a risk approach is dependent on the ability to assess the level of risk across the emission spectrum, underscoring the importance of work under way at the international level to enhance the still incomplete and heterogeneous quantity and quality of climate-related disclosures. Moreover, an accurate assessment of financial stability risk from climate change would require aggregation of risk through a taxonomy of activities that are either sustainable or environmentally harmful – while work on developing a taxonomy of the former continues, a taxonomy of the latter still needs to be developed. As a growing body of

94 See, for instance, "**Principles for the effective management and supervision of climate-related financial risks**", BCBS, 2021, and "**The implications of climate change for financial stability**", FSB, 2020.

95 See **Guidelines on the appropriate subsets of sectoral exposures to which competent or designated authorities may apply a systemic risk buffer**, EBA, September 2020.

analysis on climate-related risks becomes available, further adjustments to the macroprudential toolkit and new tools may be needed to mitigate risks to financial stability.

Lastly, since climate issues may have far-reaching impacts, coordination at global, or at least EU, level when addressing systemic CRFR is paramount. Macroprudential policy will also have to deal with cross-sectoral and cross-border issues in order to avoid arbitrage and waterbed effects[96], especially given the universal nature of climate change. In the EU, ESRB recommendations and warnings could potentially be used as a coordination tool. Indeed, the ESRB could issue recommendations/warnings to the EU as a whole or to individual Member States.

[96] "Waterbed effects" are where credit grows in the non-regulated or under-regulated (shadow) banking sector.

6 Cooperation in a broader regulatory and institutional context

Policymaking for the banking sector – and the financial sector in general – would benefit from enhanced coordination and communication, especially in times of crisis. The recent COVID-19 pandemic has shown that national macroprudential, microprudential and fiscal authorities have, to a large extent, acted independently of the authorities of other Member States. Although the actions taken by Member States were mostly similar (i.e. reducing micro and macroprudential buffers, adopting fiscal support measures), a common coordination and communication approach could increase the effectiveness of the overall response in the EU, building market confidence in the response to the COVID-19 shock. On the one hand, systemic risk may vary across countries, even in the case of a common exogenous shock, as may the timing of risk build-up once the crisis has subsided. As such, national divergence in policy responses can be fully justified. On the other hand, enhanced coordination among authorities and aligned communication, which includes increased transparency and simplicity of messaging to financial market actors and the wider public, could enhance confidence in the ability of authorities to act in an organised, consistent and decisive manner, especially if this has already been established during "good times" as part of preparation for systemic crisis events.

Closer cooperation between national authorities with different mandates and the EU authorities could help the various national and EU authorities to embed their specific policy responses in a system-wide context, thereby avoiding any unintended consequences. The COVID-19 pandemic has also shown what unexpected forms crisis events can take. As such, preparation for systemic crises could be enhanced by closer cooperation between national authorities with different mandates (resolution, supervisory, macroprudential and financial stability, and fiscal), and the relevant authorities within EU structures. Such cooperation could include a discussion of systemic stress scenarios and the use of macroprudential analytical toolkits (e.g. macroprudential stress testing or an analysis of cross-border and cross-sectoral interconnectedness) to support crisis resolution processes. It could also enhance the development of methodologies to be applied in public interest assessments. The enhancement of bank resolution planning to consider situations involving broader financial instability or a system-wide event is an important development.[97]

A cross-sectoral analysis of the entire financial sector, its vulnerabilities and potential contagion effects is needed to effectively mitigate financial stability risks. To facilitate such an analysis and react to the risks identified, macroprudential policy tools are warranted which also cover non-bank financial intermediaries. A dedicated macroprudential code providing the macroprudential framework for the entire financial system (see Section 4.3) would be helpful in this regard. While the ESRB already offers a discussion forum for cross-sectoral issues, more direct cooperation and exchange between the relevant authorities is key. This could, for example, take

[97] See the **Addendum to the Public Interest Assessment: SRB Approach**, Single Resolution Board, 31 May 2021.

the form of building on the work of supervisory colleges for conglomerates[98], the involvement of other sectoral supervisors in the respective resolution planning and crisis management exercises, and the participation of macroprudential authorities in supervisory and resolution colleges as well as in crisis management teams.

To enhance processes of joint analysis and coordination, all relevant authorities should have access to the granular data needed to assess the systemic implications of idiosyncratic or system-wide stress. Enhanced access to data would strengthen the analytical underpinnings of macroprudential policy measures, the aim being to target clearly identified risks, identify the possible side effects of policy measures at cross-border and EU level, and assess interactions with other policies. The timely exchange of granular data between micro and macroprudential authorities, central banks and resolution authorities at national and European level, as well as in a cross-border context between home and host authorities, would further improve the monitoring of systemic risks in the EU and enhance the transparency of policy actions.

Given the sensitivity of some of the information, access to data should be reciprocal and should be on a strictly need-to-know basis. These could, for example be indicators on the interconnectedness of the banking system itself and on interconnectedness between banks and non-bank financial intermediaries. In particular, it would be important for these indicators to monitor the distribution of bail-inable liabilities. The indicators could make it easier to anticipate potential spillovers, which could be cross-border as well as cross-sectoral and could enable the authorities to adopt a more appropriate policy response. For instance, it is a requirement of Article 504a of the CRR to assess whether the current MREL deduction regime, which applies only to G-SIBs that hold TLAC, and is therefore less comprehensive than the BCBS holdings standard, should be expanded.[99] Due to the mitigating effect on contagion this is relevant from both a resolution and a macroprudential perspective.

Where information access has not yet been ensured, targeted legal amendments should be considered to ensure the flow of information to the macroprudential authorities. For example, in order to create a more systematic, closer interaction between the systemic risk buffer and risk weight measures, as well as more consistency across the macroprudential instruments, Article 133 of the CRD should include a provision requiring cooperation, coordination and the exchange of information between the micro and macroprudential authorities in the same way as has been suggested for the new single risk weight article (see Section 3.2.2). Another example relates to the resolution framework, where information sharing for macroprudential and financial stability

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98 In line with **Directive 2002/87/EC** of the European Parliament and of the Council of 16 December 2002 on the supplementary supervision of credit institutions, insurance undertakings and investment firms in a financial conglomerate (OJ L 35, 11.2.2003, p. 1) and with the Basel Committee on Banking Supervision, Joint Forum, "**Principles for the supervision of financial conglomerates**", Bank for International Settlements, September 2021.

99 Article 504a of the CRR mandates the EBA to provide an analysis by 28 June 2022 with, if possible, a legislative proposal from the Commission by 28 June 2023. According to the BCBS TLAC holding standard, all internationally active banks should deduct their TLAC holdings from their Tier 2 capital. In the EU, the currently limited deduction regime could be amended so that all banks earmarked for resolution would deduct MREL holdings (on the asset side) from their own MREL or Tier 2 capital (on the liability side).

purposes could be strengthened.[100] Sharing information on impact analyses conducted on failing banks under system-wide events and on impediments to resolvability could inform the development of effective macroprudential policies. In addition, the possibility of timely accessing information on MREL requirements and resources is crucial for determining buffer usability, as shown by the ESRB[101]. In this regard, it is also important how the authorities address breaches of the combined buffer requirement on top of risk-weighted MREL. Current legal provisions give resolution authorities the power to impose distribution restrictions after consulting the microprudential supervisor. However, given the macroprudential nature of the combined buffer requirement, the macroprudential authorities should be consulted when deciding on distribution restrictions, or the restrictions should be made automatic, as is currently the case when the combined buffer requirement is breached on top of minimum risk-weighted capital requirements.[102] Moreover, legal provisions should be strengthened so that the microprudential authorities can share information for macroprudential and financial stability purposes with other relevant authorities, subject to appropriate confidentiality arrangements.[103] For instance, the microprudential authorities should immediately inform the macroprudential authorities when an institution breaches its buffer requirements. The macroprudential authorities should also be involved in assessing capital conservation plans in the event of a systemic crisis or if systemically important institutions are affected.

Ensuring the reciprocation of macroprudential measures is an important factor contributing to the effectiveness of the measures, the level playing field within the EU internal market and the reduction of regulatory arbitrage between EU countries. The reciprocation of all macroprudential measures should therefore be harmonised. Currently, reciprocation is only mandatory for the CCyB up to 2.5% in the CRD and risk weight measures in Articles 124 and 164 of the CRR. Going forward, reciprocation of Article 458 of the CRR should become mandatory, subject to materiality thresholds (see Section 3.2.2). As a consequence, the activating authority would not need to ask the ESRB to issue a recommendation to Member States asking for reciprocation of the measure. A similar requirement should be considered for the reciprocation of the SyRB above a materiality threshold[104], which would enhance the consistency of the macroprudential framework. Furthermore, a separate article on reciprocation could be created outlining the scope for reciprocity of macroprudential measures (including the use of materiality thresholds), the assessment of overlaps and procedural requirements (i.e. notifications). For those measures for which reciprocation would be voluntary, procedures could be simplified.

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100 Article 90 of the BRRD (Directive 2014/59/EU of the European Parliament and of the Council of 15 May 2014 establishing a framework for the recovery and resolution of credit institutions and investment firms (OJ L 173, 12.6.2014, p. 190)) could explicitly ensure information sharing for macroprudential and financial stability purposes. The Commission should evaluate whether an amendment of the provisions in Article 84(4) of the BRRD is necessary and whether "macroprudential and financial stability purposes" should be explicitly included in that Article.

101 See **Report of the Analytical Task Force on the overlap between capital buffers and minimum requirements**, ESRB, December 2021.

102 Article 16a and Article 17 of the BRRD should stipulate that the resolution authorities should consult the macroprudential authorities when deciding on distribution restrictions (so called M-MDA), or such restrictions should be made automatic. Distribution restrictions are also automatic when the leverage ratio buffer is breached see Article 92(1a) of the CRR).

103 For this, Article 4 of the CRD should be amended.

104 Non-material exposures should be exempted.

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Annex

Box A1

Elements of a harmonised macroprudential risk weight article for real estate exposures

Design of instrument. The instrument can be designed as a risk weight add-on, a risk weight multiplier, a risk weight floor or a combination of all three. It could also link the risk weight measure to specific risk metrics such as the loan-to-value ratio, the debt-to-income ratio or the debt service-to-income ratio (in line with the definitions in the ESRB Recommendation on closing real estate data gaps[105]). The instrument could also encompass the possibility of setting stricter criteria used to determine when an exposure under the standardised approach (SA) can be considered to be fully and completely secured.

Scope. All exposures secured by immovable property (i.e. RRE and commercial real estate (CRE) exposures) within the Member State independent of the risk measurement approach used for capital purposes (i.e. the SA or the IRB approach). Where appropriate, the scope could also include a subset of the above-mentioned exposures (e.g. a geographical or property segment). This sectoral approach is a direct transposition of the current risk weight provisions in the CRR and mirrors some of the features of the sectoral SyRB. For this purpose, the Commission could mandate the ESRB, in collaboration with the EBA, to issue a recommendation on the appropriate identification of these subsets of real estate property exposures. The intention would be to reduce inaction bias and increase symmetry within the macroprudential toolkit in order to avoid overlaps and double-counting.

Governance. The relevant authority (national competent authority or national designated authority) would be appointed by the Member State while adding the requirement of cooperation, coordination and exchange of information between the national designated authority and the national competent authority in the same way as currently required in Articles 124 and 164 of the CRR. The relevant authority should aim to avoid any duplicative or inconsistent use of the macroprudential measures laid down in the CRD and the CRR.[106] In particular, the relevant competent authority should consider whether measures implemented under this new single article duplicate or are inconsistent with other existing or upcoming systemic risk buffers.

Conditions to be met for activation. First, the actual risk weights for the exposures mentioned under “Scope” should not reflect the actual systemic risk related to the immovable property. This should be assessed and monitored by the relevant authority at least once a year (there is already a related requirement in Articles 124 and 164 of the CRR). Second, it should be ascertained that any inadequacy of risk weights identified by this assessment could have negative and severe consequences for the financial stability and real economy of a Member State.

[105] Recommendation of the European Systemic Risk Board of 21 March 2019 on closing real estate data gaps (ESRB/2019/3) (OJ C 271, 13.8.2019, p. 1).

[106] Recital 26 in CRD V.

Methodology. For assessment and monitoring according to the first condition for activation, the relevant authority should follow a common methodology when assessing the appropriateness of risk weights for macroprudential risk, while taking into consideration microprudential IRB regulation, the relevant active macroprudential measures and national specificities. For this purpose, the EBA should adjust the existing guidance concerning the assessment of the appropriateness of risk weights to reflect the features of this new single risk weight article. For the second condition mentioned above, the ESRB should provide guidance on setting higher risk weights, in the form of a recommendation based on a guided discretion approach. This recommendation should also touch on overlaps with other active instruments (such as the sectoral SyRB and CCyB), and with the output floor, without under-provisioning the targeted risk.

Limits. The article should not set ceilings on how much an authority can increase risk weights, although different authorisation requirements should apply, depending on the magnitude of the risk weight adjustment. For exposures secured by immovable property under the SA, the risk weight could be increased to 150%, which is an existing limit in Article 124 of the CRR, without an authorisation requirement. No specific limit exists (in respect of minimum average LGD values) for similar exposures under the IRB approach, and a threshold-dependent authorisation requirement is proposed.

Authorisation requirement. The ESRB would be notified prior to the activation of the instrument. If the measure concerns SA risk weights, an increase above 150% would require authorisation by the Commission and, therefore, notification which is similar to the existing notification under Article 458 of the CRR. If the measure concerns IRB risk weights, the new single article would include a threshold-dependent authorisation requirement.[107] If the country-average IRB risk weight for the target portfolio increases, after activation, above a given threshold, the ESRB and the EBA must provide opinions to the Member State within two months after receiving a notification.[108] If both opinions object to the measure, the relevant authority must comply or explain. If the country-average IRB risk weight for the target portfolio increases, after activation, to above an even higher threshold, authorisation from the Commission will be required, taking into account the opinions received from the ESRB and the EBA.[109] The notification requirements when the measure crosses the second threshold should be similar to the existing notification requirements under Article 458 of the CRR. Any authorisation provided by the Commission can only last three years but can be renewed. If the EBA and the ESRB provide opinions, they should evaluate the measure once every three years and notify the Commission if the measure no longer complies with the regulation or has a negative impact on the Single Market which outweighs the financial stability benefits resulting from the reduction in macroprudential or systemic risk. It is important for the legislator to calibrate these thresholds using data from all EU IRB banks and to clarify their measurement type (i.e. relative or levels). More importantly, the first threshold should be set much higher than the existing threshold applicable in Article 458(10) of the CRR.

[107] The SyRB has a similar feature (see Article 133(10)-(12) of the CRD).

[108] The threshold feature is already present in Article 458(10) of the CRR: “Notwithstanding the procedure as set out in paragraphs 3 to 9 of this Article, Member States shall be allowed to increase the risk weights beyond those provided for in this Regulation by up to 25 % […]”.

[109] The aim of this threshold is to ensure that the activated risk weight measure (if relatively high) does not entail disproportionate adverse effects on the whole or parts of the financial system in other Member States or in the EU as a whole, thus forming or creating an obstacle to the functioning of the Internal Market.

Activation. The recitals in the CRR should underline the fact that the relevant authority can immediately deactivate the measure in cases of market distress which jeopardises credit supply to the real economy.

Consolidation and reciprocity. It should be possible to apply the instrument at group or individual level (or both). Risk weight measures shall be subject to mandatory recognition (as is currently the case in Articles 124 and 164 of the CRR) but should be based on a defined materiality threshold which would allow banks with exposures below this threshold not to apply the measure. This threshold should be set in accordance with the ESRB Recommendation on the assessment of cross-border effects of and voluntary reciprocity for macroprudential policy measures[110], it should follow the calibration guidance provided in the ESRB handbook on operationalising macroprudential policy in the banking sector, and it should be publicly disclosed on the ESRB's website. The host authority should aim to avoid any application of the reciprocated measure which is duplicative of or inconsistent with a similar existing risk weight measure or systemic risk buffer in the host country.

Disclosure. The relevant authority should announce the activation or deactivation of the instrument (including the assessment of the appropriateness of risk weights and other relevant background information) on an appropriate website.

Box A2

Proposal for including BBMs in EU legislation

A minimum set of BBMs for RRE should be included in EU legislation, applying the BBMs to natural persons and potentially – in accordance with national frameworks – also to legal persons. The proposal envisages a common basis for BBMs but it also ensures that Member States are left with sufficient flexibility. EU legislation should define the **key concepts for BBMs** at EU level but Member States should have flexibility over specific elements of the definitions and indicators of lending standards used by national authorities in decision-making with regard to the activation, release and calibration of BBMs.

To ensure that BBMs are applied with the same scope as capital-based measures for **banks**, while at the same time extending the scope of BBMs to **non-banks**, it would be most effective to refer to BBMs in both legal texts (the CRD and the MCD), despite the existing differences between the regulatory objectives of the CRD and the MCD.

The design, calibration and activation of BBMs would remain solely at **national level** and the Commission should provide for the implementation of sufficient safeguards to ensure that the national authorities are responsible for BBMs. Member States and their authorities remain fully responsible for any decision to activate BBMs. However, it would also be strongly advisable to entrust the designated or macroprudential authorities with an active role in the activation and

[110] Recommendation of the European Systemic Risk Board of 15 December 2015 on the assessment of cross-border effects of and voluntary reciprocity for macroprudential policy measures (ESRB/2015/2) (OJ C 97, 12.3.2016, p. 9).

calibration of BBMs as it is essential, with regard to the application of BBMs, to involve authorities with sufficient experience of addressing the financial stability risks stemming from the RRE market.

Furthermore, to reduce the number of potential sources of inaction bias, a **regular assessment of the need to act using BBMs** should be made mandatory for all national authorities entrusted with decision-making in respect of BBMs. The main observations from the assessments of vulnerabilities conducted by the relevant authorities should be made transparent (e.g. in a part of the regular financial stability publication or in **another dedicated publication**).

In addition to the key elements of BBMs, EU legislation should also include an **ex post reporting** obligation to inform the ESRB of the activation/setting of BBMs, **although it should not require an authorisation procedure prior to the activation of BBMs.**

1. The inclusion of BBMs in EU legislation. Introducing BBMs into EU law, thereby enhancing the macroprudential toolkit available to all EU Member States, would be an important step towards strengthening Member States' ability to contain systemic risk related to RRE markets across the EU. This could be achieved by establishing a common basis for BBMs at EU level and facilitating the coordination of national measures to activate or set BBMs. However, the proposal does not intend to establish uniform and directly applicable prudential requirements for credit institutions in the area of lending for the financing of RRE. Instead, it seeks to ensure accountability and transparency, as well as to allow for better comparability in the activation and definition of BBMs at national level.

To ensure that the scope of BBMs is at least the same as that of capital-based measures, and at the same time to extend the scope of BBMs to non-banks, it would be more effective to refer to BBMs in both legal texts, the CRD and the MCD. Including BBMs in the CRD would complement the existing set of macroprudential instruments for the banking sector and emphasise the financial stability dimension of BBMs alongside existing capital-based and other measures, while including BBMs in the MCD would allow the authorities to apply BBMs to loans granted by all types of lenders, including insurance companies, investment funds and pension funds. In addition, Member States should be allowed to extend the scope of BBMs to other consumer loans to avoid circumvention. This would ensure a level playing field and prevent regulatory arbitrage.

2. Types of instrument. The proposal is to incorporate a minimum set of instruments for BBMs into European law. EU legislation should provide for several BBMs to address the risks to financial stability stemming from the RRE market. The BBMs to be incorporated into EU legislation should be, at a minimum, the following:

(a) limits that apply to the debt-to-income (DTI) ratio and limits that apply to the debt service-to-income (DSTI) ratio;

(b) limits that apply to the loan-to-value (LTV) ratio;

(c) limits that apply to the maturity;

(d) amortisation requirements.

These instruments are regarded as the minimum set of tools, and it should be ensured that they are available to help mitigate systemic risk, in line with international experience of BBMs. Member States should feel encouraged to go beyond this set of tools or to allow full flexibility to the respective authorities to use any macroprudential instruments related to the loan or borrower characteristics of RRE loans. Legal frameworks for BBMs, which give flexibility to the national authorities in terms of instruments that can be activated (i.e. national legal frameworks that allow for the activation of the aforementioned BBMs without listing them explicitly) should be considered to be compliant with this requirement.

In addition to making it possible to apply this set of instruments in a legally binding manner, EU legislation should explicitly allow Member States the flexibility to adapt the details (e.g. definitions), of these instruments to their national macroprudential policy needs (e.g. taking into account the specific characteristics of their national RRE market) and to add further instruments to their respective toolkits[111]. Also, in line with the principle of proportionality, Member States should be able to activate non-legally binding limits if this is deemed more appropriate in a specific situation. More specifically, Member States should therefore also be able to introduce non-legally binding BBMs by issuing macroprudential expectations. Such a possibility could either be included in EU legislation or could be an element of guidance to be issued by the ESRB in the form of recommendations.

3. Definitions of indicators. EU legislation should describe the general principles and concepts of the BBMs, leaving further details of the definitions of the BBMs to Member States, and should contain a reference to the definitions in the ESRB Recommendation on closing real estate data gaps[112]. This recommendation is particularly suitable as a starting point for establishing certain definitions of general aspects of BBMs at European level, as it has been prepared while taking into account ongoing international and European initiatives in the area of data harmonisation and collection. Although the definitions of the indicators to be used to monitor risks stemming from the RRE market should follow the aforementioned ESRB Recommendation, it should be possible to make national modifications, especially when the indicators are used in the monitoring of risks as well as the activation and calibration of BBMs at the national level. This ensures that Member States that have already activated BBMs have a level of flexibility that enables them to continue to use their current definitions of indicators at national level. To provide for sufficient flexibility at Member State level, the proposal to include BBMs at EU level would therefore not include any detailed definitions and methods for calculating indicators for BBMs such as those specified in Annex IV of the ESRB Recommendation. At this stage, detailed harmonisation of the definitions of indicators to be used in BBMs at EU level would be counterproductive in respect of the broader acceptance of BBMs and their potential use. However, Member States should be encouraged to follow the definitions specified in Annex IV of the ESRB Recommendation as closely as possible when introducing new BBMs or when amending the legal framework applicable to BBMs, if this is in line with their national specificities.

111 Depending on the availability in each country of data on individual borrowers and their overall debt in each country, limits to loan-to-income (LTI) and loan service-to-income (LSTI) should be considered to be available in the national toolkit for BBMs.

112 See **Recommendation of the European Systemic Risk Board of 31 October 2016** on closing real estate data gaps (ESRB/2016/14) (as amended by Recommendation ESRB/2019/3).

An example of the inclusion of the definition of a BBM (DTI) in EU legislation based on the ESRB Recommendation on closing real estate data gaps:

"A DTI instrument should be defined as limits to or requirements of debt-to-income ratio, which means the total debt of the borrower at the moment of loan origination relative to the borrower's total annual income at the moment of loan origination."

Apart from the definition of income as "total annual income", the proposal would not contain any other elements of income definition. In particular, it would not include the first-best definition of "disposable income" described in Annex IV of the ESRB Recommendation on closing real estate data gaps.

4. Governance. The Commission's proposal should clearly assign the responsibility for activating and calibrating BBMs to national level, and should explicitly rule out any topping-up powers for European authorities or institutions. Member States and their authorities remain fully responsible for the decision to activate, release and calibrate BBMs. However, the designated or macroprudential authorities should be entrusted with an active role in the activation and calibration of BBMs, as it is essential for the application of BBMs to involve authorities with sufficient experience of addressing the financial stability risks stemming from the RRE market. Furthermore, the regular monitoring of the risks stemming from the RRE market is essential for the supervision of the financial system and the prevention or mitigation of systemic risks to financial stability. The main observations from the assessments of vulnerabilities conducted by the relevant authorities (those entrusted with assessing systemic risk as well as those entrusted with the activation of BBMs) should be made transparent in, for example, a regular financial stability publication or in another dedicated publication. Conferring tasks associated with the monitoring of risks on macroprudential authorities should be in line with the mandates of national macroprudential authorities, as required by the ESRB in its Recommendation on the macroprudential mandate of national authorities[113]. The additional burden on macroprudential authorities would therefore be limited. In addition, the ESRB may always issue recommendations addressed to Member States that do not take appropriate action in response to risks to financial stability.

Furthermore, the requirement for cooperation, coordination and exchange of information between national authorities (including the designated or macroprudential authorities), as well as between national and EU authorities, should be a key element of the proposal to establish a common minimum toolbox of BBMs at EU level.

5. Flexibility in the use of BBMs. When transposing BBMs into national legal frameworks, Member States should be required to provide for the possibility of activating legally binding instruments so that such instruments may be effectively and efficiently used to avoid the build-up of vulnerabilities. Based on appropriateness, sufficiency and proportionality, Member States' authorities should, however, have the possibility of deciding if those instruments are activated in a legally or non-legally binding manner.

In particular, national authorities should be able to:

[113] Recommendation of the European Systemic Risk Board of 22 December 2011 on the macro-prudential mandate of national authorities (ESRB/2011/3) (OJ C 41, 14.2.2012, p. 1).

(i) activate the BBMs pre-emptively to avoid the build-up of vulnerabilities;

(ii) activate one or more BBMs at the same time, possibly in combination with other macroprudential instruments such as capital buffers;

(iii) activate BBMs in a conditional form (e.g. by applying an LTV limit or amortisation requirement to loans that do not comply with certain DSTI limits);

(iv) activate different instruments, or calibrate the same instruments differently, depending on distinct specific borrower or loan characteristics (e.g. by applying less stringent LTV limits to first-time buyers);

(v) define exemptions from the BBMs (e.g. by allowing a certain percentage of loans to be provided in breach of LTV limits or exempting certain product types altogether).

6. Conditions to be met for activation, release and calibration. The conditions to be met for the activation of or changes to BBMs should be set exclusively by Member States. To further ensure consistency the ESRB could develop a framework providing guidance to national authorities on issues such as the activation, release and calibration of BBMs as well as the principles behind the monitoring of risks related to RRE. This would promote sound and consistent decision-making across Member States, while any policy decision regarding the use of BBMs would remain explicitly with the Member States. Furthermore, BBMs should not be included in the so-called pecking order of macroprudential measures (i.e. capital buffers as well as risk weights and other measures) given their different yet complementary nature and their differing objectives and transmission channels. Decisions about the activation of BBMs and the right mix of borrower-based and capital-based measures in place should follow careful assessment of the nature and intensity of the vulnerabilities.

7. Methodologies. Member States should preferably apply a methodology, established by each Member State, when assessing and monitoring risks and when calibrating BBMs. The ESRB would be available to assist them in developing such a methodology, for instance issuing a recommendation based on the "guided discretion" approach. This approach could provide guidance on the assessment of interactions between the envisaged BBMs and other macroprudential tools, such as capital-based measures. In addition, the ESRB could facilitate discussions among Member States, as well as with the European institutions, on the setting of BBMs.

8. Ex post reporting of the measures. There should be no authorisation requirements for activating or setting BBMs. Although EU legislation should not provide for any authorisation procedure it should, however, include an ex post obligation for Member States to report to the ESRB on the activation/setting of BBMs. To promote the further transparency and comparability of national measures it would also be beneficial to include an explanation of the activated measures and to accompany the reporting with reasons for the activation, release or calibration of BBMs. There could also be an obligation to include an explanation as to why the measure is considered suitable, effective and proportionate to address the situation. The ESRB would be able to assess the proposed measures, looking at both the benefits of the macroprudential measures from a national financial stability perspective and potential spillover effects. The reporting obligation would also allow the ESRB to contribute to a further deepening of coordination between the authorities

involved by developing a coherent and consistent macroprudential policy framework in the EU and by promoting best practices.

9. Reciprocity. Ensuring the reciprocation of national measures is an important part of creating a level playing field for lenders. In principle, reaching a common understanding of the BBMs at EU level should pave the way for the implementation of provisions on reciprocation.

10. Disclosure. The relevant authority should publicly announce the activation and setting of the BBMs (including the assessment of appropriateness and other relevant background information) through the usual communication channels (such as websites) used for other macroprudential measures.

11. Transitional period. The proposal would not lead to the existing national measures being discontinued, as it does not alter the existing national frameworks for BBMs that already include the proposed set of instruments and, in principle, allow national authorities to activate legally binding instruments. However, some Member States would need to adjust their legal frameworks if these did not include the possibility of activating the full set of instruments in a legally binding manner. In order to keep transition costs low and to avoid too much interference with existing national frameworks, especially for national measures based on such national frameworks, the proposal to include BBMs at EU level would also provide for a sufficient transition period.

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For specific terminology please refer to the **ESRB glossary** (available in English only).

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