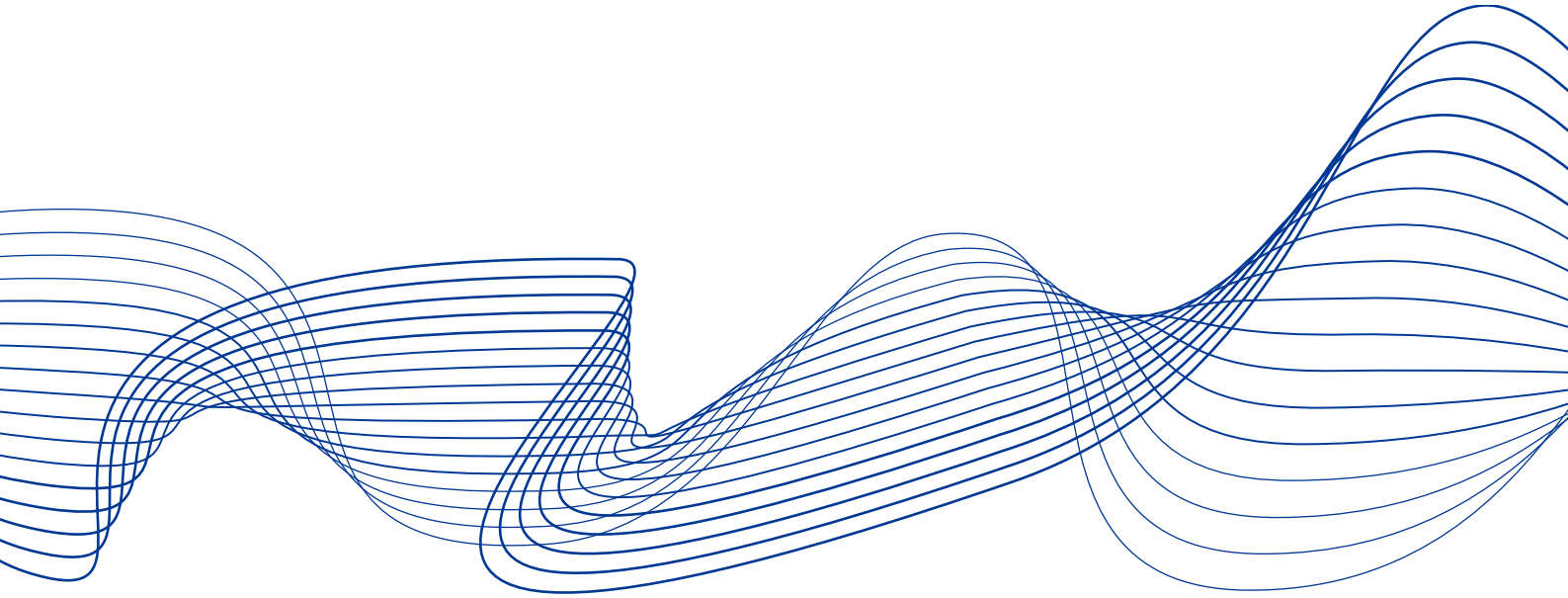
# A Review of Macroprudential Policy in the EU in 2017

**April 2018**



ESRB
European Systemic Risk Board
European System of Financial Supervision

# Contents

# Abbreviations

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|---|---|
| **AIF** | alternative investment fund |
| **BaFin** | Bundesanstalt für Finanzdienstleistungsaufsicht |
| **bp** | basis point(s) |
| **BCBS** | Basel Committee on Banking Supervision |
| **BRRD** | Bank Recovery and Resolution Directive |
| **CBD** | consolidated banking data |
| **CCoB** | capital conservation buffer |
| **CCP** | central counterparty |
| **CCyB** | countercyclical capital buffer |
| **CDS** | credit default swap |
| **CEE** | central and eastern Europe |
| **CET1** | common equity tier 1 |
| **CISS** | composite indicator of systemic stress |
| **CNB** | Česká národní banka |
| **COREP** | Common Reporting |
| **CPMI** | Committee on Payments and Market Infrastructures |
| **CRD IV** | Capital Requirements Directive[1] |
| **CRE** | commercial real estate |
| **CRR** | Capital Requirements Regulation[2] |
| **CSSF** | Commission de Surveillance du Secteur Financier |
| **DGS** | deposit guarantee scheme |
| **DSCR** | debt service coverage ratio |
| **DSTI** | debt service-to-income |
| **DTI** | debt-to-income |
| **EBA** | European Banking Authority |
| **ECB** | European Central Bank |
| **EEA** | European Economic Area |
| **EIOPA** | European Insurance and Occupational Pensions Authority |
| **EMIR** | European Market Infrastructure Regulation |
| **ESMA** | European Securities and Markets Authority |
| **ESRB** | European Systemic Risk Board |
| **EU** | European Union |
| **FCI** | financial cycle indicator |
| **FI** | Finansinspektionen |
| **FIN-FSA** | Finanssivalvonta |
| **FMA** | Financial Market Authority |
| **FME** | Fjármálaeftirlitið |
| **FPC** | Financial Policy Committee |
| **FSA** | Financial Services Authority |
| **FSB** | Financial Stability Board |
| **FSC** | Financial Stability Council |
| **FTB** | first time buyer |
| **GDP** | gross domestic product |
| **G-SII** | global systemically important institution |
| **HCSF** | Haut Conseil de stabilité financière |
| **ICAAP** | internal capital adequacy assessment process |
| **IMF** | International Monetary Fund |
| **IOSCO** | International Organization of Securities Commissions |
| **IRB** | internal ratings-based |
| **IWG** | Instruments Working Group |
| **LCR** | liquidity coverage requirement |

1 Directive 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.

2 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.

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|---|---|
| **LGD** | loss given default |
| **LIBOR** | London Interbank Offered Rate |
| **LTD** | loans-to-deposits |
| **LTI** | loan-to-income |
| **LTV** | loan-to-value |
| **MMF** | money market fund |
| **NBB/BNB** | Nationale Bank van België/Banque nationale de Belgique |
| **NBS** | Národná banka Slovenska |
| **NFC** | non-financial company |
| **NPL** | non-performing loan |
| **OIS** | overnight index swap |
| **O-SII** | other systemically important institution |
| **PD** | probability of default |
| **pp** | percentage point(s) |
| **PRA** | Prudential Regulation Authority |
| **PTI** | payment-to-income |
| **RRE** | residential real estate |
| **RW** | risk weight |
| **SA** | standardised approach |
| **SIB** | systemically important bank |
| **SII** | systemically important institution |
| **SMEs** | small and medium-sized enterprises |
| **SRC** | Systemic Risk Committee |
| **SyRB** | systemic risk buffer |
| **SREP** | supervisory review and evaluation process |
| **SRM** | Single Resolution Mechanism |
| **SSM** | Single Supervisory Mechanism |
| **UCITS** | Undertaking for Collective Investment in Transferable Securities |

# Countries

| | |
|---|---|
| **AT** | Austria |
| **BE** | Belgium |
| **BG** | Bulgaria |
| **BR** | Brazil |
| **CH** | Switzerland |
| **CN** | China |
| **CY** | Cyprus |
| **CZ** | Czech Republic |
| **DE** | Germany |
| **DK** | Denmark |
| **EE** | Estonia |
| **ES** | Spain |
| **FI** | Finland |
| **FR** | France |
| **GR** | Greece |
| **HK** | Hong Kong |
| **HR** | Croatia |
| **HU** | Hungary |
| **IE** | Ireland |
| **IS** | Iceland |
| **IT** | Italy |
| **LI** | Liechtenstein |
| **LT** | Lithuania |
| **LU** | Luxembourg |
| **LV** | Latvia |
| **MT** | Malta |
| **NL** | Netherlands |
| **NO** | Norway |
| **PL** | Poland |
| **PT** | Portugal |
| **RO** | Romania |
| **RU** | Russia |
| **SE** | Sweden |
| **SG** | Singapore |
| **SI** | Slovenia |
| **SK** | Slovakia |
| **TR** | Turkey |
| **UK** | United Kingdom |
| **US** | United States |

# Executive summary

**Most Member States took macroprudential action in 2017, though for the EU as a whole fewer measures were taken than in the previous review period.** The decline was due to fewer reciprocating measures, as the ESRB did not recommend any new measures for reciprocation. The number of domestic measures remained more or less stable. The most frequently used instruments over the past year were the systemic risk buffer (SyRB), the cap on the loan-to-value (LTV) ratio and the countercyclical capital buffer (CCyB). Most measures reflected a tighter policy, designed to address increased cyclical risks including in residential real estate (RRE) markets.

**As there are indications that the financial cycle is turning in some countries, more Member States tightened the CCyB.** In 2017, four Member States activated or increased the buffer rate and there are now seven countries in Europe that decided on a positive rate. Although extensive international and European guidance exists for the use of this instrument, there are large differences as regards key features of the national frameworks. These include the objective of the instrument, the neutral rate and the indicators used to inform the buffer decision. Implementing the CCyB framework showed the limitations of using the credit-to-GDP gap as a reference indicator for CCyB decisions, in particular after periods of prolonged excessive credit growth and for transition economies.

**The real estate sector continues to be an important target of macroprudential policy.** Around 70% of Member States had at least one measure in place targeting the RRE sector; for the commercial real estate (CRE) sector, where in some countries vulnerabilities appear to be building up, the corresponding figure is less than 40%. Several of the Member States to which the ESRB issued a warning in 2016 about medium-term vulnerabilities resulting from the RRE sector took further policy action since receiving the warning, e.g. by expanding the available set of instruments or by using or further tightening instruments. Some of the warnings did not propose specific policy action but noted the importance of monitoring developments closely and taking policy action in light of them. Some RRE measures targeted a narrower geographical area than the country.

**Structural risks are addressed by the SyRB and the buffer for other systemically important institutions (O-SII).** More countries activated the SyRB and there are now 12 Member States with an SyRB in place; some changes in 2017 concerned the level, scope or phasing-in of the buffer. As regards systemically important institutions (SIIs), most developments were of a rather technical nature, such as changes in the list of SIIs and their buffer rates, reflecting changes in systemic importance, or the adoption of a longer phasing-in period for the buffers. There are large differences in the calibration of O-SII buffer rates across countries reflecting the exercise of supervisory judgement and the absence of detailed guidance at the EU level.

**A dedicated macroprudential authority has been established and is now operational in almost all Member States.** The central bank plays a key role in the set-up, with many countries opting for a committee structure. Generally, the macroprudential mandate also covers the non-banking financial sectors, which combined are bigger in the EU than the banking sector. However, macroprudential policy actions targeting the non-bank financial sector continue to be rare, with the possible exception of actions addressing excessive credit growth. The ESRB further enhanced its monitoring of these sectors and contributed to developing a macroprudential policy framework.

**The importance of cross-border banking in the EU poses challenges to the national scope of macroprudential mandates.** One such challenge comes from the growing importance of branches compared to subsidiaries in the wake of the financial crisis, a trend that may accelerate following the announced restructuring of some large European banking groups. The ESRB contributed to addressing these challenges, in particular through the development of its reciprocity framework, but further initiatives may be needed.

# Introduction

**This Review provides an overview of the macroprudential measures adopted in the European Union (EU) in 2017.** It is an update and a further development of the reports that the ESRB has been publishing since 2015[3]. These reports draw to a large extent on notifications made by the national authorities to the ESRB and discussions within the ESRB. The latter are, in particular, supported by the work of the Instruments Working Group (IWG) and the Assessment Team on Macroprudential Measures.

**The Review is structured in four parts.** The overview chapter provides a broad outline of the national macroprudential measures that were adopted, or planned, in 2017. It starts by reviewing certain trends seen across different instruments and then turns to specific instruments. Three special features focus on structural developments in the banking sector and the implications for macroprudential policy, as well as the use of specific macroprudential instruments addressing both cyclical and structural risks. The first considers the implications of a growing role of bank branches for financial stability and macroprudential policymaking; the second compares the use of the CCyB across a sample of European countries; and the third provides a similar cross-country analysis of the use of the capital buffer for O-SIIs to address structural risks posed by SIIs.

[3] *A Review of Macroprudential Policy in the EU in 2016*, ESRB, April 2017, *A Review of Macroprudential Policy in the EU in 2015*, ESRB, May 2016, and *A review of macroprudential policy in the EU one year after the introduction of the CRD/CRR*, ESRB, June 2015.

# General overview of the policy framework and measures[4]

## 1. Introduction

**Over the past year, the ESRB further enhanced its publication of information on the macroprudential policy frameworks and measures of macroprudential interest[5].** Sources for such information are mainly the notifications to the ESRB required under the CRD IV/CRR and the various ESRB Recommendations[6] as well as input from Member States via the ESRB substructures.

An overview of measures is published on the ESRB's website and updated on a monthly basis. A separate overview with currently active capital-based measures that apply to the SIIs in each Member State was, for the first time, published in early 2017 and is updated on a quarterly basis. The CRD IV requires designated authorities to notify each quarter certain information related to the setting of the CCyB to the ESRB, which is also published. In 2017, the website was extended with a new part on the reciprocation of national macroprudential measures. Finally, the ESRB published for the first time a list of all the macroprudential authorities and designated authorities in the Member States, which will be updated on a regular basis.

**This section describes the main trends in the macroprudential policy framework and the measures initiated in 2017, as reported to the ESRB.** First, recent developments in the macroprudential policy framework in Member States[7] are discussed. Second, a broad overview is provided of the main trends observed regarding the use of instruments. Subsequently, certain instruments used to address cyclical or structural risks are reviewed in greater detail, such as the CCyB, measures relating to the real estate sector, the SyRB and the buffers for SIIs. This is followed by a discussion on cross-border banking and reciprocity. The section concludes with a review of initiatives related to macroprudential policy beyond banking.

## 2. Developments in the macroprudential policy framework

### 2.1 Macroprudential authority and mandate

**Almost all Member States now have a macroprudential authority in place, as required by Recommendation ESRB/2011/3 on the macroprudential mandate of national authorities.** In

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4 Prepared by Sacha Becker, Frank Dierick, Tomasz Gromek, Niamh Hallissey, Dieter Hendrickx, Tomáš Konečný, Sarah Lapschies, Pedram Moezzi, Alexandra Morao, Niko Plennis, Ľuboš Šesták, Stéphanie Stolz and Olaf Weeken (all ESRB Secretariat).

5 Since it remains challenging to define exactly what constitutes a macroprudential measure, in this report the broader concept of the measure of macroprudential interest is used, see *A review of macroprudential policy in the EU one year after the introduction of the CRD/CRR,* ESRB, June 2015, p. 6, for further details. To some extent, the Review relies on the qualification of a measure as macroprudential by the Member State itself.

6 See Recital 9 of Recommendation ESRB/2011/3 on the macroprudential mandate of national authorities and Recommendation C.3 of Recommendation ESRB/2013/1 on intermediate objectives and instruments of macroprudential policy.

7 Where information is available, Iceland, Liechtenstein and Norway — as members of the European Economic Area (EEA) — are also included in the discussion about developments in the EU, as the authorities of these three countries also participated in some of the ESRB's work as observers, albeit the countries are not EU Member States. As of 2017, representatives of these three countries are regularly involved as non-voting members in the meetings of the General Board and the Advisory Technical Committee and the work of the ESRB following Decision No 198/2016 of the Joint Committee of the EEA.

the course of 2017, Romania established its National Committee for Macroprudential Oversight, an interinstitutional cooperation structure comprising representatives of Banca Naţională a României, the Financial Supervisory Authority and the Government. The secretariat is provided by Banca Naţională a României and the Chair is the Governor, thus ensuring the central bank's leading role in macroprudential policy. Italy[8] and Spain are the two Member States that have not yet officially established a macroprudential authority in the sense of the Recommendation. In both cases, however, financial stability is primarily addressed by the central bank.

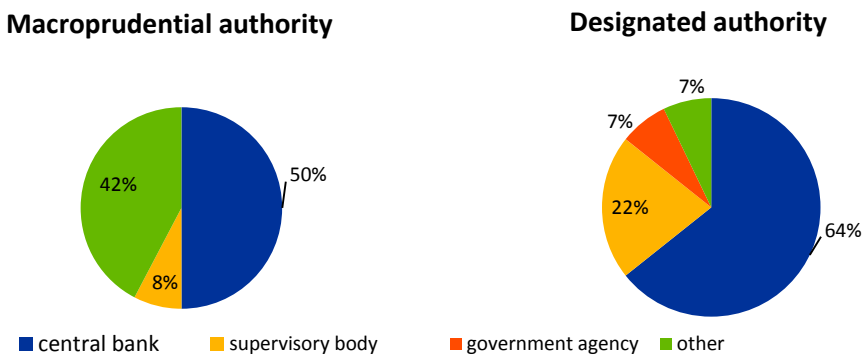
**In most Member States, the macroprudential authority is either the central bank or an interinstitutional cooperation structure, with a leading role for the central bank (Figure 1).** In two Member States only (FI, SE) the macroprudential authority is the financial supervisory authority. Interinstitutional cooperation arrangements typically take the form of a national committee for financial stability bringing together representatives of the central bank, the financial supervisor and the government; in some cases, other representatives may also be involved (e.g. of the deposit guarantee agency, resolution agency or accounting body, as well as independent members). The central bank generally plays a central role in the working of the committee, e.g. by chairing it, providing the secretariat, and/or supplying analysis. There are a few Member States where the Ministry of Finance representative acts as chair (AT, DE, LU). Generally, the committee has soft law powers, for example by issuing opinions, warnings or recommendations (e.g. PL), but sometimes it is responsible for taking binding policy decisions as well (e.g. FR).

**The macroprudential authority does not need to be the same as the designated authority that sets the CCyB rate.** In slightly more than half of the Member States, the designated authority coincides with the macroprudential authority. In Member States where the two authorities are different, the macroprudential authority very often takes the form of a committee, while the designated authority is either the central bank, the financial supervisory authority or, more rarely, a government agency such as the Ministry of Finance (PL) or the Ministry of Industry, Business and Financial Affairs (DK).

Figure 1

**Type of macroprudential authority and designated authority**

*(percentages)*




Source: ESRB.
Notes: Designated authority refers to the authority responsible for setting the CCyB rate (Article136 of Directive 2013/36/EU).

[8] Enabling Act No 170 of 12 August 2016 provided the Italian Government with the delegated power to establish the Italian Committee on Macroprudential Policy (Comitato italiano per le politiche macroprudenziali). The term for the exercise of the delegated powers was set for 16 September 2017 and expired before any action was taken.

**In all Member States the mandate of the macroprudential authority also covers the non-banking sectors of the financial system.** Mandates of macroprudential authorities beyond banking are mainly exercised through discussions and analytical work addressing systemic risks in the non-banking sectors. Such analysis can consider a wide range of issues, e.g. systemic risks emanating from CRE, the shadow banking sector, asset management activities, or the insurance and pensions fund sectors.

**Macroprudential measures in the non-banking sectors have been rare to date.** The legal frameworks of the Member States entrust macroprudential authorities with different instruments with a varying degree of binding power, such as (non-)public recommendations, warnings, the right to request and communicate information to supervisory authorities and/or supervised entities in the non-banking sectors. The majority of Member States have, to date, abstained from any direct policy intervention. This reflects perceptions of a low level of systemic risks and/or the deemed adequacy of the existing regulatory framework.

**The few macroprudential policy measures affecting the non-banking sectors have focused on the risk of excessive lending growth.** For example, in April 2016 the Haut Conseil de stabilité financière (HCSF), the French macroprudential authority, used communication as a soft tool to raise awareness of risks in CRE markets. In a number of cases, the scope of borrower-based instruments has been extended to include non-banking institutions together with banks so as to avoid the cross-sectoral migration of activities and spillover effects. Policymakers' interest, however, also extends to other areas such as cybersecurity or limiting procyclicality in the pension funds sector.

**Macroprudential supervision of the non-banking sectors is enhanced by institutional arrangements between the macroprudential authority, the sectoral supervisory authorities, and the central bank.** In the case of an integrated supervisory framework, the need for external coordination and information exchange diminishes accordingly. Mechanisms for cooperation among all authorities (including the exchange of information) are formally addressed via statutory coordination by law, memoranda of understanding, and in some (integrated) frameworks through informal arrangements.

**At the European level, in 2017 the Commission published its proposals for the ESRB Review[9].** The proposals include making the President of the European Central Bank (ECB) the permanent chair of the ESRB, enhancing the role of the head of the ESRB Secretariat, including the Single Supervisory Mechanism (SSM) and the Single Resolution Board as voting members of the General Board, and requiring that the ESRB consults interested parties to inform its opinions, recommendations and decisions.

## 2.2 Macroprudential instruments

**A number of important initiatives that impact the national framework for macroprudential policymaking took place over the past year across the EU.** Following the advice of the Financial Market Stability Board, the macroprudential authority of **Austria**, the Financial Market Authority or Finanzmarktaufsicht (FMA) will, from July 2018 onwards, have the power to adopt borrower-based measures such as limits on LTV, debt-to-income (DTI) and debt-service-to-income (DSTI) ratios as well as limits on maturities of newly granted real estate loans. FMA may further set amortisation

[9] European Commission, Proposal for a Regulation of the European Parliament and of the Council amending Regulation (EU) No 1092/2010 on European Union macroprudential oversight of the financial system and establishing a European Systemic Risk Board, 20 September 2017.

requirements, apply exemptions and *de minimis* quotas as well as differentiate the measures according to location and purpose.

**Belgium** adopted a law which introduced a new macroprudential tool by allowing Nationale Bank van België/Banque nationale de Belgique (NBB/BNB) to impose on credit institutions and brokerage firms minimum funding requirements. These requirements can be set bank by bank, by category of banks or for the Belgian banking sector as a whole, and need to be met by own funds, subordinated debt, debt instruments belonging to a newly created category of senior non-preferred debt, and other eligible debt.

**Finland** was one of the few Member States where the SyRB was not yet available in the macroprudential toolbox. Under the CRD IV, Member States may introduce an SyRB to prevent and mitigate long-term non-cyclical systemic or macroprudential risks not covered by the CRR. End 2017, a law was passed giving Finanssivalvonta (FIN-FSA) the power to impose an SyRB on banks.

In **France**, the "Sapin II" law – or Law on Transparency, the Fight against Corruption and Modernisation of the Economy – of December 2016 has a number of provisions that relate to macroprudential policy and reinforce the powers of HCSF as the macroprudential authority. The law extends the power of HCSF to impose borrower-based instruments on all types of lenders (not only banks and insurers as before). HCSF further obtains new macroprudential tools for the insurance sector and its powers to access information and data from any relevant actor are reinforced.

**Luxembourg** decided to expand the macroprudential toolkit by including borrower-based lending limits to mitigate potential risks stemming from the RRE sector. Discussions between the relevant national authorities took place in the Systemic Risk Committee (SRC). In December 2017, the Minister of Finance introduced a draft bill with the aim of providing the national designated authority (Commission de Surveillance du Secteur Financier or the CSSF) with new powers to determine such limits. The CSSF, when acting in that capacity, takes decisions only upon a recommendation by the SRC and after consulting with the central bank in order to reach a common position.

**Sweden** adopted amendments to the legislation in December 2017 giving Finansinspektionen (the Swedish FSA), the macroprudential authority in Sweden, additional macroprudential tools to counter financial imbalances in the credit market. The non-exhaustive list of tools includes instruments such as limits on LTV, LTI and DSTI ratios. The new amendments entered into force on 1 February 2018. Finansinspektionen will also have the possibility to reciprocate similar measures taken in other EEA countries.

**The review of the CRD IV/CRR is still ongoing.** The CRD IV/CRR rules not only provide the common regulatory framework for microprudential supervision but also for a set of macroprudential instruments to mitigate systemic risk in the banking sector[10]. The ESRB already provided input to this review[11]. Two particularly important areas of discussion are the structural macroprudential buffers, on which the ESRB recently issued a detailed opinion[12], and the macroprudential use of Pillar 2 (Box 1).

[10] In this publication, the terms bank and credit institution are used interchangeably.

[11] ESRB response to the European Commission's Consultation Document on the *Review of the EU Macroprudential Policy Framework*, 24 October 2016.

[12] ESRB, Opinion to the European Commission on structural macroprudential buffers**,** December 2017.

Box 1

## The use of Pillar 2 for macroprudential purposes: Pros and cons

**Under the Basel Capital Framework, three distinct Pillars act in unison to strengthen the soundness of the banking system and mitigate financial instability.** The three Pillars aim to increase banks' resilience against potential and existing risks, be they idiosyncratic or systemic. Pillar 2 is a flexible toolbox that aims to address risks not sufficiently covered by the minimum capital requirements under Pillar 1 and to provide incentives for banks to enhance their risk management practices. As a prerequisite to its use, both an external and a bank-internal assessment need to be performed.[1] Aside from assessing external risks posed and faced by the bank, systemic risk arising from the institution is also gauged.[2] Furthermore, Articles 103 and 104 of the CRD permit, in the EU, the use of Pillar 2 measures against a group of institutions with similar risk profiles.

**Experience in the use of Pillar 2 has shown that there is a potential overlap between microprudential and macroprudential policy objectives.** Pillar 2 may be used to address risks and factors not captured by Pillar 1, including those that are external to the bank. Some view it as a quintessentially microprudential tool because Pillar 2 measures are institution-specific. However, it may be argued that some risks identified at the bank-level stem from external factors, or that an institution itself poses a risk to financial stability, giving it potentially a broader scope.[3]

**There is an ongoing debate in the supervisory community on the scope of Pillar 2 and what its exact purpose should be.** The debate ultimately revolves around CRD articles which, as they stand, permit the use of Pillar 2 for macroprudential purposes. The differing views were, for example, expressed in some of the responses to the European Commission's public consultation on the Review of the EU Macroprudential Policy framework in 2016.

The view of some is that Pillar 2 should continue to be used for macroprudential purposes and that legislative amendments are required to improve its coordination and effectiveness, in turn ensuring that the potential for the double-counting of risks is mitigated. Others, by contrast, are of the view that Pillar 2 should only be used to address the risks threatening a specific bank and that there should also be no constraints as regards to its use for microprudential purposes; consequently, the use of Pillar 2 must be restricted to microprudential authorities only.[4] In this latter view, systemic risks should be solely addressed through the macroprudential toolkit. In that case, changes in the toolkit should be introduced (e.g. through an enhancement of Article 458 of the CRR) to ensure that authorities' scope to address systemic risks and to impose macroprudential measures, including measures of a non-capital nature, is not constrained.

**The macroprudential use of Pillar 2 is not confined to conceptual thinking.** Finansinspektionen in Sweden used it to target the four largest domestic banks by bolstering their required common equity Tier 1 (CET1) capital.[5] NBB/BNB used Pillar 2 for macroprudential purposes in order to curb excessive trading activities undertaken by Belgian banks by introducing a capital surcharge for trading activities exceeding a certain threshold; although this is currently not a binding measure and serves as a backstop. In Slovenia, the central bank imposed an upper limit on interest rates paid out on deposits as part of the ICAAP-SREP process. In essence, a capital add-on is imposed on banks for any subsequent

deposits with an interest rate exceeding this cap, provided the source of the deposit is private and non-bank; in the present low interest rate environment, this measure is not binding. In the United Kingdom, a loan-to-income (LTI) limit was implemented to limit new lending at an LTI at or above 4.5. The policy was applied to a group of firms as a Pillar 2 measure, with the aim of ensuring that potential economic instability arising from excessive household indebtedness is abated.

**Pillar 2 has certain pros and cons in addressing systemic risk.** Its flexibility to shape measures to specific vulnerabilities and institutions is a clear advantage. Measures can be applied to certain exposures, used as sub-sectoral capital requirements or even to keep in check excessive leverage of a bank, thus isolating and countering the root of the systemic risk in question. Furthermore, in their practical application, microprudential and macroprudential measures are closely interlinked and cannot always be easily separated.

However, there are also limitations arising from the institution-specific nature of Pillar 2, notably the possible lack of transparency, as measures imposed within the Pillar 2 framework are legally not required to be disclosed to the public, potentially foregoing (beneficial) signalling effects. There also exists the possibility of coordination problems, in particular for cross-border banking groups with a college of supervisors, as the CRD does not require the involvement of macroprudential authorities in the process when Pillar 2 is used for macroprudential purposes. This may give rise to offsetting effects from the separate actions taken by the competent and designated authorities. Furthermore, the possibility of the double-counting of risks may increase the regulatory burden for the institution.

**The ESRB's view, as expressed in its response to the aforementioned Commission consultation of 2016[6], is that if Pillar 2 continues to be used for macroprudential purposes, there is a need to further enhance and formalise the coordination and cooperation between microprudential and macroprudential authorities.** Macroprudential authorities should clearly communicate macroprudential policies to microprudential authorities and the latter should share their decisions insofar as they are of relevance to the conduct of macroprudential policy (particularly the Pillar 2 stance). As coordination by itself may not be sufficient to address any possible conflicts, a clear hierarchy between policy objectives may also be needed, with predominance given to the macroprudential objective.

*1) A bank must undertake the Internal Capital Adequacy Assessment Process (ICAAP) which ensures that it has assessed the risks posed to its current and future operations, whilst also having employed correct risk management techniques internally to manage such risks. This goes hand in hand with the Supervisory Review and Evaluation Process (SREP), as conducted by the college of supervisors in charge of supervising a specific bank.*
*2) Article 98 of the CRD places the onus on the competent authority to account for both cyclical and structural risks, through the SREP.*
*3) ESRB (2015), The ESRB Handbook on operationalising macroprudential policy in the banking sector.*
*4) In its package of proposed banking reforms released in November 2016, the European Commission proposed that Pillar 2 would be used exclusively for microprudential purposes. The Commission argues that this will avoid overlaps in the use of the different capital tools and promotes a more consistent application of the rules.*
*5) An additional 2 pp common equity Tier 1 capital requirement is placed on these banks. Finansinspektionen (FI) looks at systemic risk arising from a number of causes when conducting its capital assessment for Pillar 2 requirements; these risks include credit-related concentration risk, interest rate risk in the banking book and pension risk. Additionally, risks arising from the shutdown of the securitisation markets are also assessed, as outlined by FI's memorandum of 29 June 2017.*
*6) ESRB (2016), ESRB contribution to the European Commission's consultation on the Review of the EU Macroprudential Policy Framework.*

## 3. Developments in the use of instruments

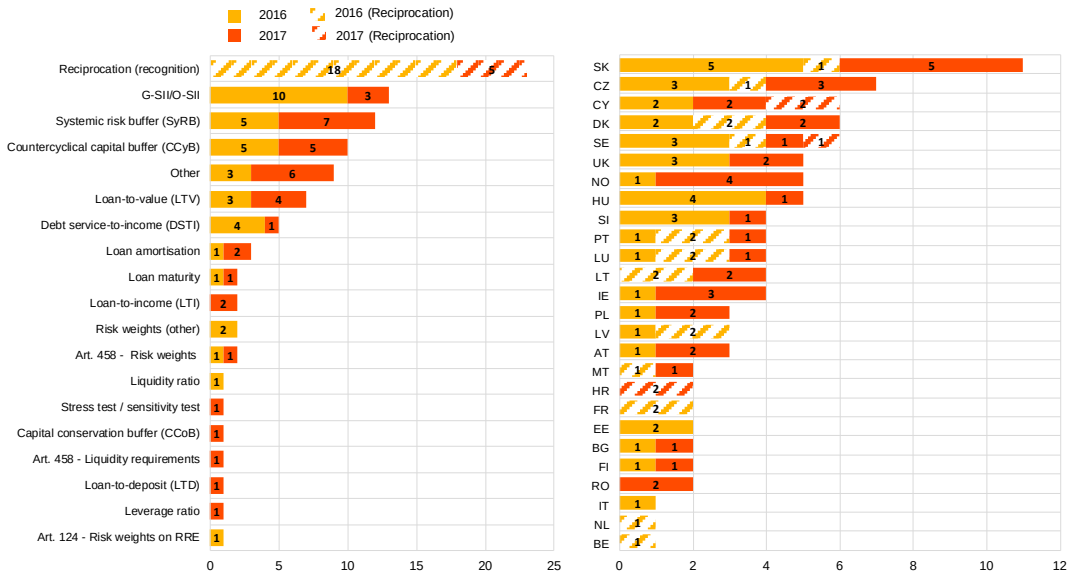
**Compared to 2016, there was a significant decline in the total number of macroprudential measures adopted by Member States (Figure 2).** The years 2017 and 2016 are more comparable than the previous years, as in most Member States all the elements of the CRD IV/CRR macroprudential toolbox were available in this period. The decline over 2016-17 is, to a large extent, due to the number of reciprocation measures taken in 2016 following the Belgian RRE measure under Article 458 of the CRR and the Estonian SyRB. In 2017, the ESRB did not recommend any new measures to be reciprocated, so there was no need for any new reciprocating actions. Excluding reciprocity measures, the number of domestic macroprudential measures remained more or less stable compared to 2016. The most frequently used instruments were the SyRB, the LTV cap and the CCyB.

The Member States that registered the largest number of measures in 2017 were Cyprus, the Czech Republic, Ireland and Slovakia. However, this conclusion should be put somewhat into perspective, as a number of initiatives in these countries were related to reciprocation measures (CY) or the further development of measures already in place, in particular for the RRE sector (CZ, IE, SK).

Figure 2

**Number of substantial measures notified to the ESRB (2016-17)**

*(Number of measures by measure type (left panel) and by Member State (right panel))*




Source: ESRB.

Notes: Notifications need not necessarily refer to new macroprudential measures, as they can also refer to changes to measures already in place. All measures are deemed to be substantial apart from measures of a more procedural or administrative nature, such as the early introduction of the capital conservation buffer (CCoB) and exempting small and medium-sized investment firms from the CCoB or CCyB. The figure does not include unchanged CCyB rates or those set at 0%. In the case of G-SII/O-SII, the measures cover only changes in the methodology of the G-SII/O-SII identification and buffer-setting (not to changes in the number of G-SIIs/O-SIIs or their buffer levels resulting from the actual application of the same methodology) or changes in the phasing-in arrangements.

**Most Member States took some macroprudential policy action in 2017 and most actions were of a tightening nature to address cyclical risks.** Investigating whether a Member State has tightened or loosened the use of macroprudential instruments gives a simple, but also incomplete, indication of the orientation of its macroprudential policy. Table 1 below shows that most policy actions in 2017 were of a tightening nature and addressed cyclical risks (use of the CCyB, real

estate instruments and some other cyclical measures). The most significant changes that occurred in 2017 are reviewed in greater detail further below.

Table 1
**Tightening or loosening of macroprudential instruments in 2017**

| Country | Countercyclical capital buffer | Real estate instruments | Systemic risk buffer | O-SII/G-SII buffer | Other instruments |
|---|---|---|---|---|---|
| Austria | → | → | ↑ | → | → |
| Belgium | → | → | → | → | → |
| Bulgaria | → | → | → | → | → |
| Croatia | → | → | → | → | → |
| Cyprus | → | → | → | → | ↑↓ |
| Czech Republic | ↑ | ↑ | → | → | → |
| Denmark | → | ↑ | ↑ | → | → |
| Estonia | → | → | → | → | → |
| Finland | → | ↑ | → | → | → |
| France | → | → | → | → | → |
| Germany | → | → | → | → | → |
| Greece | → | → | → | → | → |
| Hungary | → | → | → | → | → |
| Ireland | → | → | → | → | → |
| Italy | → | → | → | → | → |
| Latvia | → | → | → | → | → |
| Lithuania | ↑ | ↑ | → | → | → |
| Luxembourg | → | → | → | ↑ | → |
| Malta | → | → | → | → | ↑ |
| Netherlands | → | → | → | → | → |
| Norway | → | ↑ | → | → | → |
| Poland | → | → | ↑ | → | ↑ |
| Portugal | → | → | → | ↓ | → |
| Romania | → | → | ↑ | → | ↑ |
| Slovakia | ↑ | → | → | ↓ | ↑ |
| Slovenia | → | → | → | ↓ | → |
| Spain | → | → | → | → | → |
| Sweden | → | ↑ | → | → | → |
| United Kingdom | ↑ | → | → | → | → |

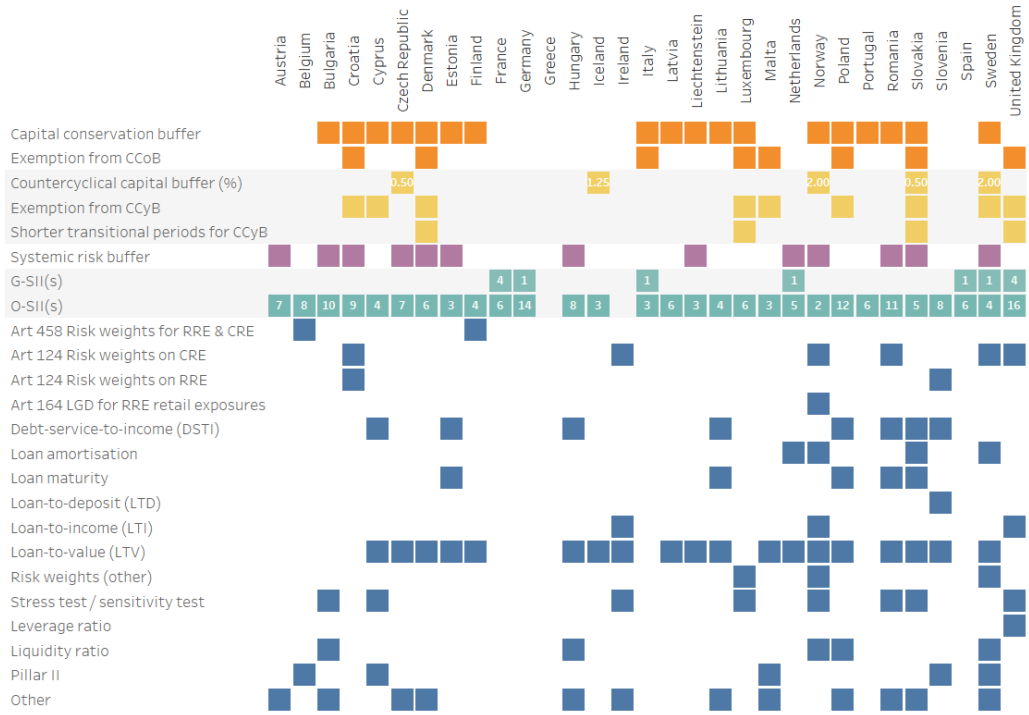
Source: ESRB.
Notes: ↑ (red) refers to tightening; ↓ (green) refers to loosening; ↑↓ (orange) refers to tightening and loosening at the same time; → (grey) refers to no change. Tightening/loosening refers to the policy situation compared to the situation before the adoption of the measure. The table refers to measures taken in 2017 but which may sometimes come into effect later. Similarly, measures coming into effect in 2017 but adopted earlier are not shown. In the case of G-SII/O-SII buffers, tightening/loosening refers to changes in the methodology of the G-SII/O-SII identification and buffer-setting (not to changes in the number of G-SIIs/O-SIIs or their buffer levels resulting from the actual application of the same methodology) or changes in the phasing-in arrangements.

**There are clear differences across Member States as regards macroprudential instruments that were effectively in use in 2017.** Figure 3 provides an overview of the tools active in 2017.

Some of the countries from northern, central and eastern Europe were very active users of such instruments; others, like some of the larger Member States and the countries that suffered most from the recent financial crisis, took a much less activist approach. Such variations can be due to differing views as regards the role of macroprudential policy, the different phase in which the financial cycle countries find themselves, etc.

**An analysis based only on the use, or changes in the use, of instruments by country clearly has limitations.** To obtain a more complete view of a country's effective macroprudential policy stance, this should be complemented with an assessment of the systemic risk conditions in the different Member States.

Figure 3
**Overview of active macroprudential measures in Europe (at Q4 2017)**




Source: ESRB.
Notes: Coloured boxes for the capital conservation buffer and the countercyclical capital buffer indicate an earlier transition period than the one foreseen in the CRD IV. The number in the box for the countercyclical capital buffer refers to the prevailing buffer rate at Q4 2017. If no box is shown for the countercyclical capital buffer, either a positive buffer rate has not been set or a positive rate has been set but not implemented at Q4 2017.The number in the boxes for G-SIIs and O-SIIs refers to the number of such institutions identified as G-SIIs or O-SIIs for Q4 2017. This is based on the application dates of the official notifications sent to the ESRB and does not signify whether an SII buffer has been set or not and regardless of its phase-in arrangements; if no box is shown then the notification's date of application falls after Q4 2017 (GR, IE). The Belgian Pillar 2 measure is currently not binding and serves as a backstop.

## 4. Use of the countercyclical capital buffer

### 4.1 Setting of domestic buffers

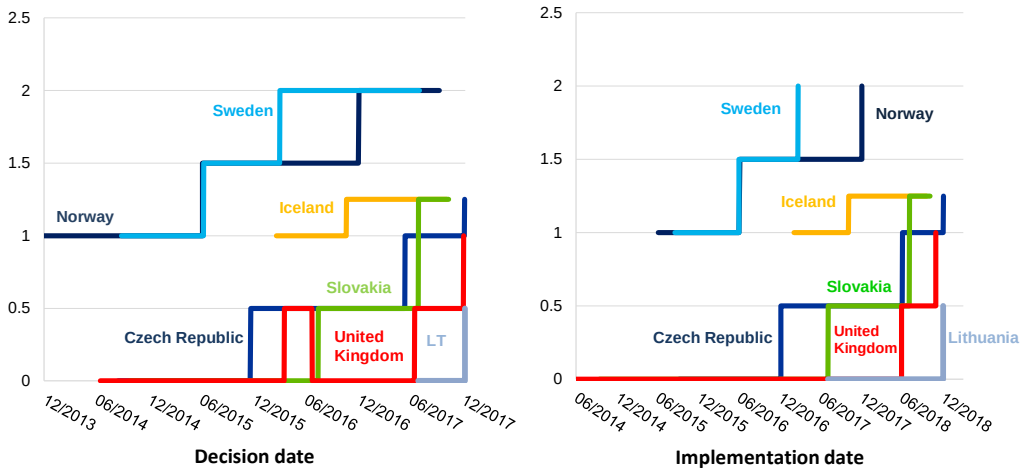
**Several Member States activated the CCyB or further increased the rate in 2017 (Figure 4).** In response to rapid credit growth, especially mortgage and consumer loans, the Czech Republic decided to increase the buffer rate twice, first from 0.5% to 1% (May) and then to 1.25% (December). Slovakia also decided on an increase of its rate from 0.5% to 1.25% (July) and the United Kingdom from 0% to 0.5% (June) and from 0.5% to 1% (November). Lithuania activated the CCyB for the first time by deciding to set a buffer rate at 0.5% (December).

In December, Denmark's Systemic Risk Council recommended that the Minister for Industry, Business and Financial Affairs should set a buffer rate of 0.5% from end-March 2019 onwards; the Council further indicated that if the build-up of risk did not change materially, it expected to recommend another increase of the buffer rate by 0.5 pp within 2019.

Figure 4

**Countercyclical capital buffer rates – decision and implementation**

*(percentages)*




Source: ESRB.
Notes: The UK's Financial Policy Committee introduced a CCyB rate of 0.5% in March 2016. However, following the results of the EU referendum in June 2016, the UK's Financial Policy Committee decided to reduce the CCyB rate to 0% effective immediately.

**There are now five Member States (CZ, LT, SE, SK, UK), as well as Iceland and Norway, that maintained or introduced a positive buffer rate during 2017.** As further explained in Special Feature B, the CCyB is coming increasingly into focus as a policy lever to increase banks' resilience against future stress in the financial system, as there are indications that the financial cycle in a number of European countries is turning. With the exception of the United Kingdom and Lithuania, the positive rate in these seven countries already came into force in 2017, taking into account that a buffer requirement generally enters into force one year after it has been decided upon by the designated authority (Figure 4).

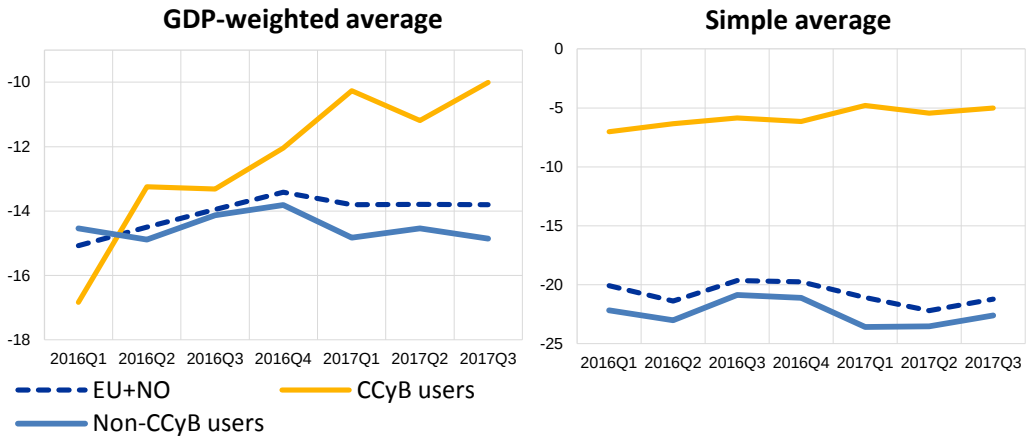
It is noteworthy that for these countries, the credit-to-GDP gap, the benchmark indicator for setting the CCyB rate, is, on average, still very much in negative territory, illustrating the limitations of relying on this one particular indicator (Figure 5). Indeed, the indicator has a number of well-known undesirable statistical properties. The long-run trend on which the indicator is based gives undue weight to the period before the financial crisis and might therefore be biased downwards; an alternative situation of a bias upwards might occur for developing economies.[13] In practice, therefore, countries often use additional indicators to better reflect national specificities (see Special Feature B).

[13] ECB, *Financial Stability Review,* May 2017, Special Feature B: Measuring credit gaps for macroprudential policy.

Figure 5

**Credit-to-GDP gaps – CCyB users and non-users**

*(percentage points)*




Source: ESRB.
Notes: Aggregate measures of credit-to-GDP gaps for three groups were obtained by weighing their gaps by their relative GDP size in the group. CZ, LT, SE, SK, UK and NO were defined as CCyB users. Iceland was excluded in order to keep the data methodology consistent with regard to the measure of GDP.

**As an increasing number of countries have positive CCyB rates in place or plan to do so in the near future, more information becomes available on the actual implementation of national frameworks.** For example, Denmark recently revised its method for assessing the buffer rate drawing on the experience gained thus far.[14] The revised methodology aims at an early phasing-in to ensure that the buffer is built up in time before the financial system is hit by a significant shock; early phasing-in also increases the possibility of phasing in the buffer more gradually. Special Feature B compares the CCyB framework for a sample of countries along some key dimensions.

## 4.2 Setting of buffers for third countries

**In addition to setting domestic CCyB rates, the EU capital rules for banks also foresee the possibility of setting rates for exposures to third countries.** National legislation implementing Article 139 of the CRD gives the right to national authorities to set a CCyB rate for third (i.e. non-EU) countries that domestic banks must apply when calculating their institution-specific CCyB. This right may be exercised when the third country has not set and published a CCyB or the CCyB is not deemed sufficient to protect their banks from the risk of excessive credit growth in that country. In addition, Article 138 of the CRD explicitly states the possibility of the ESRB recommending the setting of a CCyB rate for third countries.

**The ESRB detailed its approach in a recommendation and decision.**[15] The objective was to implement a coherent approach across the Union for setting CCyB rates for exposures to third countries in order to prevent regulatory arbitrage. Given the very large number of third countries, the ESRB, the Member States and the ECB focus on identifying and monitoring material countries.

[14] *The countercyclical capital buffer*, Det Systemiski Risikoråd , 17 November 2017.

[15] Recommendation ESRB/2015/1 on recognising and setting countercyclical capital buffer rates for exposures to third countries and Decision ESRB/2015/3 on the assessment of materiality of third countries for the Union's banking system in relation to the recognition and setting of countercyclical buffer rates.

**The ESRB, the Member States and the ECB share the responsibility of identifying and monitoring material third countries.** The respective lists of material countries are to be reviewed and potentially revised annually, while the countries identified are to be monitored at regular intervals.

- **The ESRB** establishes to which third countries the EU banking system as a whole has material exposures. This identification is based on a pre-agreed methodology that uses quantitative information on exposures of the EU banking sector to the real economy of third countries.[16] The methodology uses three metrics from the common supervisory reporting: (i) risk-weighted exposure amounts; (ii) original exposures; and (iii) defaulted exposures.

  A third country will be identified as material for the EU banking sector and added to the list of material third countries if: (i) the mean of exposures to the third country in the eight quarters preceding the reference date was at least 1% of total EU exposures for at least one of the three metrics; and (ii) the exposures in each of the two quarters preceding the reference date were at least 1% of total EU exposures for at least one of the three metrics.

  A third country will be deleted from the list of material third countries if: (i) the mean of exposures to the third country in the 12 quarters preceding the reference date was less than 1 % of total EU exposures for all three metrics; and (ii) the exposures in each of the two quarters preceding the reference date was less than 1% of total EU exposures for all three metrics. The criteria for deletion are therefore more stringent than the criteria for identification.

  The ESRB also monitors developments in those countries for signs of excessive credit growth. If the ESRB considers that mitigating actions should be coordinated across the Union, it will issue a recommendation to designated authorities on setting the appropriate CCyB rate for exposures to the third country in question.

- **Member States** establish to which third countries the banking system in their jurisdiction has material exposures. This should be based on, but not necessarily limited to, quantitative information on exposures of domestically authorised institutions to third countries. Member States also monitor developments in those third countries for signs of excessive credit growth. If designated authorities discover such signs in any of the countries they monitor and they consider that setting a CCyB rate for that country is needed, they inform the ESRB. They further inform the ESRB of the material third countries that they will not monitor, because they are already being monitored by the ESRB.

- **The ECB** identifies third countries that are material for the banking system of the SSM as a whole and monitors the third countries identified as material.[17] The ECB also monitors developments in those third countries for signs of excessive credit growth. If the ECB identifies such signs in one of these countries and considers that setting a CCyB rate for exposures to that country is needed, it will inform the ESRB. The ECB also notifies to the ESRB those material third countries that it will not monitor because they are already being monitored by the ESRB.

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16 See Articles 3 and 4 of Decision ESRB/2015/3.

17 Council Regulation (EU) No 1024/2013 of 15 October 2013 (“SSM Regulation”) assigns macroprudential tasks to the ECB (Article 5 of the SSM Regulation). For example, the ECB may apply higher requirements for the CCyB than those applied by the national designated authorities participating in the SSM (including for third countries). For this exclusive purpose, the ECB is considered, as appropriate, the designated authority. Therefore, the ECB falls within the category of designated authority for the purposes of Article 139 of the CRD and ESRB Recommendation 2015/1 (see recital 16).

**The data sources underlying the identification by the ESRB, the ECB and the Member States vary in granularity and coverage.** The ESRB uses supervisory data that is aggregated at the EU level and obtained from the EBA in the form of Member State aggregates. The underlying sample covers around 200 large banks in the EU. The ECB uses bank-level supervisory data for about 350 large euro area banks. The Member States, in turn, have access to bank-level supervisory data for the full universe of their respective banks.

**In 2017, the ESRB revised its list of material third countries, adding Singapore and Switzerland.** The initial list established in 2015 included the United States, Hong Kong, China, Turkey, Brazil, and Russia. The ESRB revised this list in 2017 in line with Decision ESRB/2015/3. In the annual revisions, new countries can be added. Furthermore, the countries on the list can be either confirmed or not. In the latter case, they are in principle dropped only if they meet the deletion criteria. However, the criteria for deletion were not to be used in the first revision round of 2017.[18] Finally, discretion can be used, amending the result of the purely mechanical revision. The 2017 revision resulted in the following (see Table 2):

- **The United States, Hong Kong, Brazil and Turkey were confirmed.** The application of the criteria for identification confirmed their earlier identification in 2015.
- **China and Russia were not deleted from the list.** The exposures of the EU banking sector to both countries had fallen since 2015.[19] Hence, both countries would not have been identified by the application of the identification criteria. Yet, China did not fulfil the criteria for being deleted. While Russia fulfilled the criteria for deletion, these criteria were not to be used in the 2017 round of revision (see above).
- **Singapore and Switzerland were added to the list.** Exposures to both countries had increased since 2015. In the 2017 revision, Singapore met the identification criteria. While this was not the case for Switzerland, it was nevertheless added using discretion because of the large overlap in identification among Member States. With six Member States identifying Switzerland as material for their banking systems, adding Switzerland to the ESRB list of material third countries allows a significant reduction in monitoring efforts, as Member States could leave it to the ESRB Secretariat to monitor this country.
- **Further countries were not identified as material.** While Mexico and the Cayman Islands even ranked above Turkey and Russia in terms of original exposures in Q4 2016, neither country met all the required identification criteria.

In sum, the new list of third countries that are material for the EU banking sector now includes **the United States, Hong Kong, Singapore, Switzerland, China, Brazil, Turkey, and Russia** in descending order of exposures for the EU banking sector.

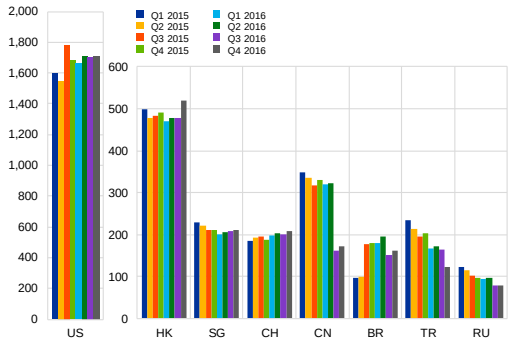
[18] See Article 5(2) of Decision ESRB/2015/3.

[19] The drop in the exposure to China was mostly driven by the regulatory treatment of HSBC's investment in BoCom, which changed from proportional consolidation of risk-weighted assets to a deduction from capital at 30 September 2016 (subject to regulatory thresholds).

Figure 6

**Credit exposures of Member States vis-à-vis the eight material third countries monitored by the ESRB**

*(euro billions)*




Source: EBA, ESRB calculations.
Notes: Sum of total original exposures to the real economy of banks in Member States to the United States (US), Hong Kong (HK), Switzerland (CH), China (CN), Turkey (TR), Singapore (SG), Brazil (BR) and Russia (RU). Third countries are ranked according to original exposures to the real economy in Q4 2016.

**The exposure of the EU banking sector to the material third countries on the ESRB list is highly heterogeneous (see Table 1.1 in Annex 1).** The exposure to the United States is by far the largest, standing at more than three and eight times the exposure for the countries to which the EU banking sector has the second and third largest exposures, i.e. Hong Kong and Singapore.

**In line with Recommendation ESRB/2015/1, Member States also reviewed their lists of material third countries.** In 2016, Member States had identified material third countries for the first time. In 2017, Member States reviewed their lists for the first time, with some amending their methodologies on that occasion.

**Only a few Member States amended their methodologies for identifying material third countries.** As reported in last year's Review, the vast majority of Member States apply the same methodology as used by the ESRB for identifying material third countries (see Table 1.2 in Annex 1). Although the ESRB methodology for identifying material third countries is prescriptive for the ESRB Secretariat but not for the Member States, most of the latter decided to apply it in its original or partially amended form. Only a few Member States amended their methodologies over the past year (DK, ES, HU, MT, NL), mostly by adding a layer of expert judgment or aligning the threshold level with the one used by the ESRB. The ECB developed its methodology over the last year. Its methodology is based on that of the ESRB, using monetary statistics in addition to the above-mentioned metrics and adding concentration and diversification proxies as well.

**The lists of material third countries maintained by Member States did not change substantially compared to the previous year** (see Table 2). 16 Member States maintained last year's list without any change. Eight Member States added one third country each, and one Member State (Malta) added three third countries. Four Member States deleted one third country each.

**As in the previous year, the number of identified material third countries varies widely by Member State, as does the overlap in the identification of such countries**. The number of identified material countries ranges from zero (seven Member States) to ten (the Netherlands). The overlap in the identification of countries is highest for the eight material countries identified and monitored by the ESRB: The overlap is significantly lower for those countries additionally identified by Member States: three Member States (AT, HU, NL) identified Ukraine as material, while all other additional countries are significant for only one Member State.

**In 2017, the ECB and Norway also notified their lists of material third countries to the ESRB.** Unsurprisingly, there is a large overlap in the countries identified by the ESRB for the EU banking sector and by the ECB for the SSM banking sector (the United States, Switzerland, Brazil, and Turkey). However, four countries were identified by the ESRB, but not by the ECB (Hong Kong, Singapore, China, and Russia). The difference can be explained by the fact that the exposures to Hong Kong and Singapore are mainly held by UK banks. In addition, China and Russia were identified by the ESRB in 2015, but the EU exposures to these countries have decreased since then. They would therefore not have been identified in 2017. One third country was identified by the ECB (Mexico), but not by the ESRB.

**Member States take different approaches to monitoring the eight material third countries identified and monitored by the ESRB**. 15 Member States (plus Norway) do not themselves monitor the eight material third countries identified and monitored by the ESRB, but leave it to the ESRB. Four Member States monitor these eight countries themselves; some do so because of broader purposes than only the CCyB.

Table 2

**Material third countries as identified by Member States**

| | Third countries monitored by ESRB Secretariat | | | | | | | | Other third countries | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | USA | Hong Kong | Singapore | Switzerland | China | Brazil | Turkey | Russia | Angola | Australia | Bosnia-Herzegovina | Cayman Islands | Chile | Macao | Marshall Islands | Mexico | Montenegro | Morocco | Mozambique | Peru | Saudi Arabia | Serbia | Ukraine | UAE | # |
| AT | ● | | | ● | ● | | ● | ● | | | | | | | | | | | | | | | ● | | 6 |
| BE | ● | | | ● | | | ● | | | | | | | | | | | | | | | | | | 3 |
| BG | ▲ | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| CY | | | | | | | | ● | | | | | | | | | | | | | | | | | 1 |
| CZ | | | | | | | ● | ● | | | | | | | | | | | | | | | | | 2 |
| DE | ● | | | ● | | | | | | | | | | | ▲ | | | | | | | | | | 3 |
| DK | | | | | | | | | | | | | | | | | | | | | | | | | 0 |
| EE | | | | | | | | | | | | | | | | | | | | | | | | | 0 |
| ES | ● | | | | | ● | ● | | | | | | ● | | | ● | | | | ▲ | | | | | 6 |
| FI | × | | | | | | | | | | | | | | | | | | | | | | | | 0 |
| FR | ● | | | ● | | | × | | | | | | | | | | | ● | | | | | | | 3 |
| GR | | | | | | | ● | | | | | | | | | | | | | | | | | | 1 |
| HR | | | | | | | | | | | ▲ | | | | | | | | | | | | | | 1 |
| HU | | | | | | | | ● | | | | | | | | | ● | | | | | ▲ | ● | | 4 |
| IE | ● | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| IT | ● | | | ▲ | | | ● | ● | | | | | | | | | | | | | | | | | 4 |
| LT | | | | | | | | ▲ | | | | | | | | | | | | | | | | | 1 |
| LU | ● | | | ● | ● | ● | ▲ | | | | | | | | | | | | | | | | | | 5 |
| LV | ● | | | | | | | ● | | | | | | | | | | | | | | | | | 2 |
| MT | ▲ | | | | | | ▲ | ▲ | | | | | | | | | | | | | | | | ● | 4 |
| NL | ● | ● | ● | ● | ● | ● | ● | | | ● | | × | | | | | | | | | ● | | ● | | 10 |
| PL | | | | | | | | | | | | | | | | | | | | | | | | | 0 |
| PT | | | | | | | | | ● | | | | | ● | | | | | ● | | | | | | 3 |
| RO | | | | | | | | | | | | | | | | | | | | | | | | | 0 |
| SE | ● | | | | | | | × | | | | | | | | | | | | | | | | | 1 |
| SI | | | | | | | | | | | | | | | | | | | | | | | | | 0 |
| SK | | | | | | | | | | | | | | | | | | | | | | | | | 0 |
| UK | ● | ● | | | ● | | | | | | | | | | | | | | | | | | | | 3 |
| # | 14 | 2 | 1 | 7 | 4 | 3 | 9 | 8 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 1 | 65 |
| ECB | ▲ | | | ▲ | | ▲ | ▲ | | | | | | | | | ▲ | | | | | | | | | 5 |
| NO | ▲ | | | | | | | | | | | | | | | | | | | | | | | | 1 |

Source: EBA, ESRB.

Notes: The markers show the material third countries as identified by the respective Member State. Third countries monitored by the ESRB (blue shading) are ranked according to original exposures to the real economy in Q4 2016. Subsequent ordering of third countries is alphabetical. Markers in orange mean that the respective Member State does not monitor this particular third country because the latter is already monitored by the ESRB. Dots refer to third countries that have been assessed as material in both June 2016 and June 2017. New additions to this list, as identified in June 2017, are represented by a triangle, whilst a cross signifies a deletion of a third country from the list maintained by the respective Member State. The ECB and Norwegian materiality assessments are not included in the tally. There is no information available as to material third countries in Q2 2016 for the ECB and Norway.

## 5. Measures related to real estate lending

**Real estate lending remains one of the most important areas for macroprudential policymaking.** In 2016 the ESRB issued warnings to eight Member States following the identification of medium-term vulnerabilities in their RRE sector.[20] Several policy initiatives of Member States in 2017 can be seen as direct follow-up to these warnings. More recently, the ESRB

[20] See **http://www.esrb.europa.eu/mppa/warnings/html/index.en.html**

has been discussing vulnerabilities in the CRE sector.[21] The Review of 2016 already identified some of the marked differences between these two segments of the real estate market.[22]

**The following national initiatives can be flagged, some of which are discussed in greater detail below:**

- **Austria.** The FMA was given the power to adopt borrower-based measures (see Section 2.2). The FMA also updated its minimum standards for the risk management and granting of foreign currency loans and loans with repayment vehicles.
- **Belgium.** Plans to add a risk-sensitive component to the 5 pp flat risk weight add-on for IRB banks' retail exposures secured by residential immovable property in Belgium (see below).
- **Czech Republic.** Česká národní banka (CNB) made a number of changes to its non-binding recommendation regarding retail mortgage loans (see below).
- **Denmark.** Following a recommendation by the Systemic Risk Council, the Ministry of Industry, Business and Financial Affairs introduced through the consumer protection act restrictions on risky mortgage loans for home owners from 2018 onwards. Loans are considered risky if the DTI ratio is above 400% and the LTV ratio is above 60%. The restriction is only applicable to loans for which the fixed interest rate period is less than five years, and loans with deferred amortisation and floating rates for which the fixed interest rate period is five years and above.
- **Finland.** Introduction of an average risk weight floor of 15% for mortgage loans from 2018 onwards (see below).
- **Germany.** In June 2017, legislation entered into force creating the legal basis for borrower-based measures in the area of housing loans (caps on LTV; amortisation requirement).
- **Iceland.** Introduction of a binding LTV limit of 85% (90% for first-time buyers) for new mortgage loans from July 2017 onwards and covering all institutions that provide mortgage loans.
- **Ireland.** Revisions to the existing proportionate LTV and LTI measures, with a refinement to the application of the LTI allowance (differentiating between first-time and second-time / subsequent buyers) and a technical amendment on collateral valuations. Both revisions were introduced to increase the effectiveness of existing measures.
- **Lithuania.** The existing Responsible Lending Regulations were amended so that the lending standards, including the requirement to calculate LTV and DSTI ratios, are applied from July 2017 onwards to natural persons who are carrying out construction or lease activities for business purposes. The updated Regulations are now applicable to all credit providers when issuing mortgages to natural persons, be it banks, credit unions, and other non-bank institutions.
- **Luxembourg.** A draft bill was introduced with the aim of including borrower-based lending limits in the macroprudential toolkit (see Section 2.2).
- **Poland.** Recommendations by the Financial Stability Committee on the restructuring of banks' existing stock of housing loans in foreign currencies (see below).
- **Slovakia.** Národná banka Slovenska (NBS) introduced DSTI and maturity limits for consumer loans, also to avoid circumvention of existing limits for mortgage loans (see Section 8.1).

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21 ESRB, Press release of 20 December 2017.

22 *A Review of Macroprudential Policy in the EU in 2015*, ESRB, May 2016, pp. 20-22.

- **Sweden.** Finansinspektionen introduced a stricter amortisation requirement linked to the borrower's LTI, effective as of 1 March 2018. New borrowers with mortgage loans exceeding 4.5 times their gross income are required to repay at least 1% of the mortgage in excess of the current amortisation requirement (which is linked to the mortgage's LTV). The authority was also given additional macroprudential tools to address financial imbalances in the credit market (see Section 2.2).

**CNB extended the scope of its Recommendation on the management of risks associated with retail mortgage loans.** First, it extended the area of assessment of clients' ability to service their loans and to withstand increased stress to other loans provided subsequently to those clients. Second, with a view to standardising the terms and conditions for all loans, CNB extended the scope of application of its Recommendation to all credit providers. All loan providers should now monitor the DTI and DSTI ratios, set internal limits and prudently assess loan applications on the basis of these. Lenders should particularly prudently assess loan applications of applicants whose DTI ratio exceeds 8 and DSTI ratio exceeds 40%, especially if the loan has a high LTV.

**The Norwegian Ministry of Finance replaced the regulation on requirements for new residential mortgage loans that expired at the end of 2016.** The new regulation has several elements:

- a stress test/sensitivity test (when assessing a borrower's debt-servicing ability, the lender needs to make allowances for an interest rate increase of 5 pp);
- an LTI requirement (total debt may not exceed five times the debtor's gross annual income; this is a new measure);
- an LTV requirement (the LTV is capped at 85%, and a new cap at 60% for secondary homes in Oslo, additional collateral is accepted);
- a loan amortisation requirement; residential mortgage loans with an LTV greater than 60% (tightened from 70%) need to be amortised at a rate of 2.5% per annum or equivalent to an annuity loan with a 30-year repayment period);
- a "speed limit"; 10% of the mortgage volume per quarter is allowed not to meet the regulatory requirements (the limit is 8% for mortgages in Oslo).

**The Polish Financial Stability Committee (KSF) issued recommendations in early 2017 on the restructuring of banks' existing stock of housing loans in foreign currencies.** Lending in foreign currencies posed a financial stability risk in several Member States and was the very first risk on which the ESRB issued a recommendation[23]. As follow-up, several countries took initiatives, in particular in relation to the flow of new loans; the problem of the outstanding stock of loans is however more challenging to address[24]. The KSF recommendations are addressed to the Financial Supervision Authority, the Minister of Finance and the Bank Guarantee Fund. They aim at a gradual restructuring of banks' existing stock of loans in foreign currencies, which should, in principle, be based on a voluntary agreement between banks and their customers. The recommendations further list microprudential and macroprudential tools available to authorities to address the problem, including capital add-ons, debtor relief measures, good practices for loan restructuring, and risk-based contributions to the deposit insurance fund.

**In the course of 2017, the ESRB issued two opinions under Article 458 of the CRR that supported stricter national capital measures related to the RRE sector.** The first one concerned a Belgian measure that was scheduled to replace an earlier one, also taken under

[23] Recommendation ESRB/2011/1 of 21 September 2011 on lending in foreign currencies.

[24] See *A Review of Macroprudential Policy in the EU in 2015*, ESRB, May 2016, pp. 11-4.

Article 458 of the CRR and that expired in May 2017.[25] The expired measure consisted of a macroprudential capital buffer in the form of a general risk weight add-on of 5 pp for banks using the internal ratings based (IRB) approach for their Belgian retail mortgage exposures. The new measure would keep the buffer in place but add a risk-sensitive component. The latter would consist of a risk weight add-on that targeted exposures with high LTV ratios (by means of imposing higher loss given default - LGD - floors on these exposures), i.e. those individual exposures for which the revalued LTV ratios would exceed certain thresholds at the time of the buffer calculation.

The ESRB gave a positive opinion on the draft measure and the European Commission adopted a decision not to propose an implementing act to the EU Council to reject it. However, in the end the Belgian government did not approve the draft measure and asked NBB/BNB to maintain the original measure and to reassess the RRE vulnerabilities. NBB/BNB committed to conduct a new assessment and to propose an appropriate measure should RRE risks persevere. In the meantime, as a temporary solution, the original, expired measure was replaced by a non-binding recommendation to the banks concerned to maintain on a voluntary basis the capital buffers following the 5 pp risk weight add-on. In November, NBB/BNB announced that its updated assessment indicated the need for an additional measure and that it was now considering a measure based on a credit institution's total mortgage portfolio rather than the risk profile of individual mortgage loans.

The second opinion related to a Finnish measure that was planned to come into effect in 2018.[26] The draft measure assigned a credit institution-specific floor of 15% to the average risk weight for residential mortgage loans of credit institutions using the IRB approach. In this case, too, the ESRB gave a positive opinion and the Commission adopted a decision not to propose an implementing act to the EU Council to reject the draft measure.

**Annexes 2 and 3 provide an overview of the RRE and CRE instruments that were active in the Member States in 2017**. They indicate that while around 70% of Member States had an RRE measure in place, this figure drops to less than 40% for CRE measures. The ESRB documented earlier the challenges related to the use of macroprudential instruments for the CRE sector.[27]

A helpful typology for grouping real estate instruments is the classification into household (or income) stretch (e.g. LTI, DTI and DSTI limits), collateral stretch (e.g. LTV limits) and lender stretch instruments (e.g. risk weights).[28] Annex 2 shows that collateral stretch instruments are the most popular, followed by the household/income stretch instruments. While lender-based instruments are regularly used, this seems to be less frequently the case than for the other two categories. These differences can at least in part be explained by the relative effectiveness of the different types of measures. Box 2 indicates the caps or values applied by Member States for their different RRE instruments. However, one should be wary of any cross-country comparison because of the absence of harmonised definitions. The ESRB has tried to address such differences through its Recommendation 2016/14 on closing real estate data gaps by prescribing target definitions for LTV, LTI, DTI and DSTI.

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[25] Opinion ESRB/2017/1 regarding Belgian notification of a stricter national measure based on Article 458 of Regulation (EU) No 575/2013 of the European Parliament and of the Council on prudential requirements for credit institutions and investment firms, ESRB, 13 March 2017.

[26] Opinion regarding Finnish notification of a stricter national measure based on Article 458 of Regulation (EU) No 575/2013 of the European Parliament and of the Council on prudential requirements for credit institutions and investment firms, ESRB, 19 July 2017.

[27] *Commercial real estate and financial stability in the EU*, ESRB, December 2015.

[28] *Residential real estate and financial stability in the EU*, ESRB, December 2015, p. 86 and further.

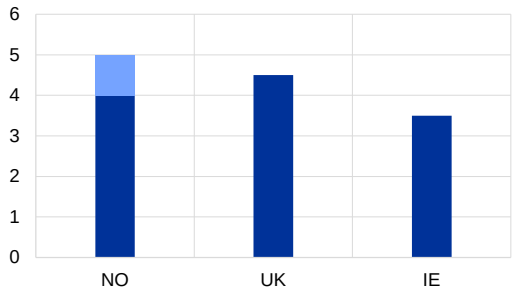
Box 2

## Calibrated values for instruments targeting the residential real estate sector

Figure 7

### Limits to the LTI ratio by Member State

*(multiples)*



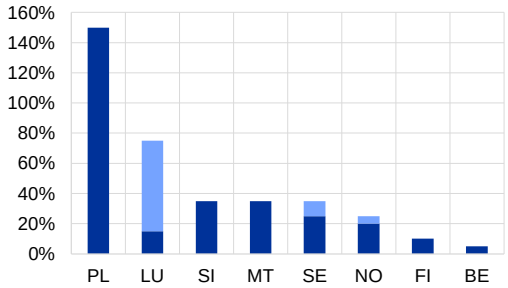

Source: ESRB.

Notes: As of Q4 2017. In **Norway**, 10% of the mortgage volume per quarter is permitted to not meet one or more of the stress tests, LTI, LTV and amortisation requirements; this is lowered to 8% in Oslo. In the **United Kingdom**, new residential mortgages with an LTI at or greater than 4.5 shall not exceed a 15% share of the aggregate volume of new residential mortgage loans; this is subject to a lender-specific *de minimis* exception of GBP 100 million per annum, or those extending fewer than 300 mortgages. In **Ireland**, not more than 20% of the aggregate value of new housing loans may exceed an LTI of 3.5.

Figure 8

### Applied risk weights by Member State

*(percentages)*



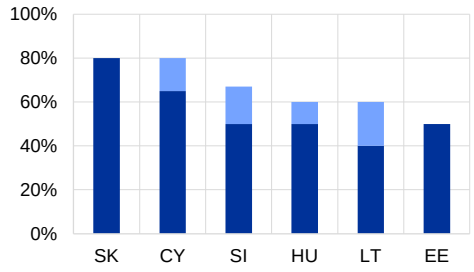

Source: ESRB.

Notes: As of Q4 2017. In **Poland**, a risk weight of 150% is applied to exposures secured by residential property where the principal or interest instalments depend on changes in the exchange rate of currencies, provided the borrower's income is in a different currency. In **Luxembourg**, the IRB approach for calculating the risk-weighted exposure amounts for credit risk to the retail (non-SME) exposures secured by residential property must not be less than 15%; although this is in place as a recommendation. Whereas, for the standardised approach the 75% risk weight applies to the part of a mortgage exceeding 80% of the value of the real estate object. For **Slovenia**, the risk weights attached are 35% for residential real estate with a maximum LTV of 60%. In **Malta**, the risk weight applies to those loans secured by residential real estate with a maximum LTV of 70%. The **Finnish** risk weight refers to the minimum level of average risk weight for housing loans from IRB banks. For **Sweden**, regulation means risk weights of 35% at the very least for banks using the standardised approach. For IRB banks, a risk weight floor of 25% is applied to exposures to residential real estate. Risk weights in **Norwegian** IRB banks for residential real estate are around 20–25%. The minimum Loss Given Default (LGD) model parameter in IRB banks' residential mortgage models was increased to 20% in 2014. Finanstilsynet also issued new requirements for the calibration of IRB banks' residential mortgage models effective from 2015. The recalibration entails an increase in the minimum Probability of Default (PD) for individual loans to 0.2% and an increase in the long-term average PD. In the case of **Belgium**, the risk weight is an add-on for the exposures to Belgian residential real estate of IRB banks. The measure expired in May 2017 and was replaced by a non-binding recommendation to the banks.

Figure 9

### Limits to the DSTI ratio by Member State

*(percentages)*



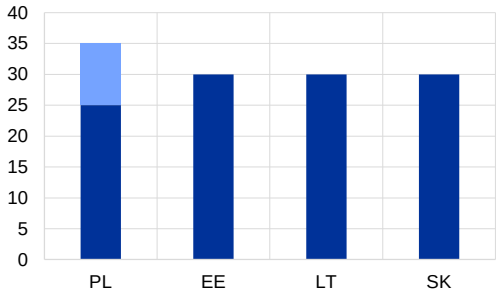

Source: ESRB.

Notes: As of Q4 2017. In **Slovakia**, loan instalments may not exceed 80% of a borrower's disposable income, as of July 2018 and following a phase-in period from March 2017. In this case, disposable income is defined as net income less the minimum subsistence amount. In **Cyprus**, the DSTI limit should not exceed 80% of the borrower's net disposable income (65% for foreign currency loans). In **Slovenia**, the DSTI is recommended to be 50% for monthly income up to and including €1,700, whilst any part above this is permitted a 67% DSTI limit; even stricter limits apply to lower-income borrowers. The **Hungarian** PTI (Payment-to-Income) limits vary by the currency of the loan, but for the domestic currency it stands at 50% for those with a monthly income under HUF 400,000 and 60% for those at or above HUF 400,000. For euro-denominated loans the limits are 25% (< HUF 400,000) and 30% (≥ HUF 400,000), whereas other currencies are subject to the limit of 10% (if < HUF 400,000) and 15% (if ≥ HUF 400,000). Currently **Lithuania** has implemented a DSTI limit of 40% with a possibility of 60% for up to 5% of the value of total new housing loans granted. In **Estonia**, a maximum of 15% of new housing loans may breach the limit per quarter; additionally, a borrower's debt servicing ability is tested with a 6% interest rate.

Figure 10

### Limits to loan maturity by Member State

*(in years)*



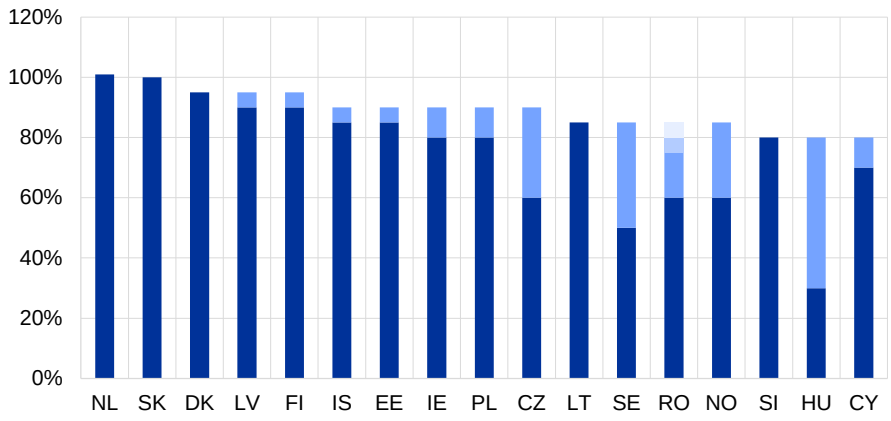

Source: ESRB.

Notes: As of Q4 2017. In **Poland**, the loan maturity is capped at 25 years, however a borrower may ask for a maturity up to 35 years, although the lender must assess creditworthiness assuming a maturity of 25 years. In **Estonia**, a maximum of 15% of new housing loans may breach the limit per quarter. The **Lithuanian** limit applies to new housing loans, as of November 2015. In **Slovakia**, no more than 10% of new loans may exceed a 30-year maturity.

Figure 11

**Limits to the LTV ratio by Member State**

*(percentages)*




Source: ESRB.

Notes: As of Q4 2017. In the **Netherlands**, the LTV will reach its resting state at 100% LTV as of 2018. In **Slovakia**, ultimate cap of 100% with 10% of the share of new loans permitted to exceed a LTV of 90% and the share of new loans with an LTV of over 80% is capped at 40%. In **Denmark**, a Supervisory Diamond framework applies from 2018, tightening the requirements for interest-only and variable-rate lending, in addition to restrictions on the growth of lending (cap of 15%). For **Latvia**, the maximum LTV may reach 95% if loans are guaranteed by the state under the *Law on Assistance in Resolution of Dwelling Issues (July 2014)*. In **Finland**, the LTV limit is 95% for first-time buyers (FTBs), 90% otherwise. **Iceland** has an 85% LTV cap (90% for FTBs). In **Estonia**, a maximum of 15% of new housing loans may breach the limit per quarter, whilst those loans guaranteed by KredEx may have a maximum LTV of 90%. For **Ireland** the maximum LTV applies to fFTBs and 80% for non-FTBs. In **Poland**, the Polish Financial Supervision Authority sought to ensure an LTV cap of 80% was in place, with this increasing to 90% if that part above 80% is insured/collateralised with funds in bank accounts, government or NBP securities. In the **Czech Republic**, a limit of 15% of new loans per quarter with an LTV of 80% to 90% and an LTV cap of 60% for buy-to-let financing with high risk levels. **Sweden** has an 85% LTV cap and additionally maintains amortisation requirements if the LTV exceeds 50%. In **Romania**, the LTVs applicable are 60%, 75%, 80% and 85% for FX loans to unhedged borrowers, euro-denominated loans to unhedged borrowers, foreign exchange loans to hedged borrowers and local currency-denominated loans, respectively. **Norway** 85% cap, 60% for secondary homes in Oslo. 60% cap for home equity lines of credit. Scope of acceptable collateral has been widened. 10% of mortgage volume per quarter permitted to exceed regulatory limits, 8% in Oslo. These LTV measures apply until mid-2018. In **Hungary**, the LTV cap is dependent on the currency; for new mortgage loans the range is 35%-80% and for new vehicle loans the range is 30%-75%. Borrowers in **Cyprus** are permitted to obtain loans with an LTV of 80% for primary permanent residency financing, or 70% for all other property financing cases.

## 6. Use of the systemic risk buffer

**Member States increasingly relied on the SyRB in 2017.** Finland made the necessary legal changes to introduce this instrument into the macroprudential toolbox (see Section 2.2). In all Member States, with the exception of Ireland and Italy, this instrument is now potentially available for use by the macroprudential authority. Poland and the Faroe Islands[29] introduced new SyRBs. In Romania the earlier decision to deactivate the SyRB came into effect, but the country decided in December 2017 to introduce a new SyRB from June 2018 onwards. A number of other countries adjusted their existing SyRB frameworks. The changes related mainly to the level, scope or phasing-in of the buffer. As this instrument is used to address long term non-cyclical systemic risks

[29] The Danish Minister for Industry, Business and Financial Affairs decided on 2 May 2017 to set a general systemic risk buffer rate of 1% for exposures in the Faroe Islands from 1 January 2018 onwards following a recommendation of the Systemic Risk Council (SRC) of Denmark from 30 March 2017. Although the Faroe Islands are not an EU Member State and therefore not subject to EU legislation, the Danish Finanstilsynet is responsible for banking supervision in the Faroe Islands. Moreover, all Danish credit institutions with exposures in the Faroe Islands above DKK 200 million were requested to reciprocate the buffer.

one would expect that the modalities in the use of the buffer would not change frequently. Under Union law, the SyRB needs to be reviewed at least every second year.

**As a result, 12 Member States as well as Liechtenstein and Norway now have an SyRB in place whose implementation modalities vary significantly.** Figure 12 and Table 3 at the end of this section illustrate that the implementation of this instrument varies widely across countries in terms of scope, phasing-in arrangements and the type of risk being addressed. This underscores the great flexibility of the SyRB in addressing a wide variety of long-term non-cyclical risks.

**Many Member States that have activated the SyRB use it to top up or as an alternative to the O-SII buffer, which is capped at 2% under Union law[30].** This was the case for Croatia, the Czech Republic, Denmark, Liechtenstein, the Netherlands, Slovakia and Sweden in 2017 and for the announced measure in the United Kingdom. The ESRB argued in its October 2016 response to the Commission's consultation on the Review of the EU Macroprudential Policy Framework that it would be more appropriate if the dedicated tool were used to address the specific risk it was created for. To this end, the ESRB subsequently proposed[31] to increase the O-SII buffer cap to 3% with the possibility for designated authorities to impose O-SII buffers higher than 3%, subject to approval from the European Commission. These general rules would always apply, including in the case of subsidiaries. Additionally for subsidiaries, it was proposed to increase their O-SII buffer cap so that their O-SII buffer would not exceed the fully phased in O-SII or G-SII buffer applicable to the group at the consolidated level by more than 2 pp.

**A few Member States target different sources of systemic risk or sectoral risks with the SyRB.** The Austrian SyRB targets the combination of the following risk drivers at the banking system level: (i) the banking system's very large size relative to the country's GDP; (ii) its very large exposures towards emerging markets; (iii) the presence of complex governance structures and double leverage of banks; (iv) a lower capitalisation compared to other EU/EA banking systems; (v) its low profitability. These risks are combined and a single SyRB rate is calibrated for each bank's total exposure. Croatia addresses the risk of O-SIIs, macroeconomic imbalances, illiquidity of the real estate market and a concentration risk with the SyRB; again a single rate is calibrated for each bank covering all exposures. Denmark targets the O-SIIs with an SyRB applied to all exposures and the systemic risk in the Faroe Islands with an SyRB applied to domestic exposures. Hungary aims at the systemic risk of problem exposures to the CRE sector. Based on the ratio of the targeted exposures to the domestic Pillar 1 capital requirements of the bank, a different rate is set for the banks concerned. Liechtenstein addresses the vulnerabilities of its small and open economy stemming from the key role of its concentrated banking sector and significant common exposures.

**The same exposures cannot be subject to multiple SyRBs.** As noted in the unofficial opinion of the Commission in *EBA Q&A 2017_3229*, which refers to a case of reciprocation, the SyRB is an exposure (and not a risk) targeting measure, so there cannot be two SyRBs simultaneously applied to the same exposures.[32] If a reciprocating Member State has already activated an SyRB covering the same exposures subject to reciprocation, the two SyRB rates can thus not be cumulated; instead, the rule of "the higher of the two SyRB rates" applies. Thus, under the current regime, the

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30 If an O-SII is a subsidiary of a G-SII or O-SII which is an EU parent institution and subject to an O-SII buffer on a consolidated basis, the buffer that applies at individual or sub-consolidated level for the first O-SII is the higher of 1% of the total risk exposure and the G-SII or O-SII buffer applicable to the group at the consolidated level. See also Special Feature C.

31 **Opinion to the European Commission on structural macroprudential buffers**, ESRB, December 2017.

32 **https://www.eba.europa.eu/single-rule-book-qa/-/qna/view/publicId/2017_3229**. The case in question refers to the reciprocation of the Estonian SyRB by Denmark which already has an SyRB in place for O-SIIs.

authority is constrained by calibrating a single SyRB based on the sum of all relevant risks.[33] The ESRB proposed to allow the SyRB to target specific sources of structural systemic risk in a risk-sensitive manner. This would be achieved by allowing the SyRB to be used to target specific subsets of exposures and by addressing distinct sources of risk with different SyRBs.[34]

**The following national initiatives in 2017 can be mentioned:**

**Austria** has applied the SyRB since 2016 to mitigate structural systemic vulnerabilities of the banking sector and systemic cluster risk from large foreign exposures of Austrian banks. The SyRB was reviewed in 2017 resulting in two additional banks being subject to the buffer from 2018 onwards.

**The Czech Republic** uses the SyRB, rather than the O-SII buffer, to mitigate the systemic risk originating from SIIs. Both the identification of banks subject to the buffer and the buffer size were changed in 2016, coming into force on 1 January 2017.

**Denmark,** just like the Czech Republic, uses only the SyRB to mitigate the risk resulting from SIIs. One of the institutions subject to the SyRB changed in 2017 following the transformation of a Danish subsidiary of the Nordea Group into a branch. Furthermore, the Ministry of Industry, Business and Financial Affairs decided in May on an SyRB of 1% of domestic exposures to all credit institutions in the Faroe Islands[35]. In addition, all Danish credit institutions with exposures in the Faroe Islands above DKK 200 million were requested to recognise the SyRB. The SyRB aims to address the risk of strong fluctuations in the economy of these islands, which is small, open and with a concentrated business structure heavily dependent on fisheries and aquaculture.

Last year's Review reported that **Hungary** decided to postpone the introduction of the SyRB until 1 July 2017, six months later than originally scheduled. The level of the SyRB for a specific bank is determined as a function of its problem exposures to the CRE sector, thus providing an incentive to banks to clean up their balance sheet. The identification of the banks subject to the buffer and the establishment of their buffer rate are carried out every year. In March 2017, two banks were at or above the 30% threshold of the ratio of problem CRE exposures to the sub-consolidated domestic Pillar 1 capital requirement and also had problem exposures exceeding the HUF 5 billion *de minimis* limit. These banks were therefore required to maintain an SyRB from 1 July 2017 onwards.

**Liechtenstein** introduced for its O-SIIs an SyRB of 2.5% of all exposures from 1 February 2015 onwards; however the SyRB was notified to the ESRB in 2017 for the first time. The aim of the SyRB is to address structural systemic risks resulting from the country's small and open economy, prone to rapid transmission of external shocks. This vulnerability is amplified by various structural factors, notably the bank-centred financial sector, the key role of the banking sector for the economy and the importance of private banking / wealth management for the international bank clientele. Moreover, the banking sector is characterised by a relatively high degree of concentration with a few dominant O-SIIs and common exposures to the main economic sectors (RRE, CRE and the non-financial corporate sector).

**Poland** introduced an SyRB to address the risk from a high level of interconnectedness of the Polish economy with other EU economies. Uncertainty about growth in developed economies,

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33 More detailed guidance is available in the revised Chapter 4 of the **ESRB Handbook on Operationalising macroprudential policy in the banking sector**.

34 Ibid.

35 The Danish Finanstilsynet is responsible for banking supervision in the Faroe Islands, while insurance firms and pension funds are supervised by the local supervisory authority. The Faroe Islands are not a member of the EU and therefore not subject to EU legislation.

potentially triggered by geopolitical events, may result in a significant adverse economic shock for the Polish economy, which could be amplified by its perception as an emerging market. Stress test results showed that in such a scenario several Polish banks could become permanently unprofitable and/or face shortages of regulatory capital. The resulting lack of lending would aggravate the situation. The Financial Stability Committee (KSF) issued a non-binding recommendation addressed to the Ministry of Finance in January 2017. In its recommendation KSF recommended setting an SyRB of 3% of domestic exposures for all banks. Following this, in September 2017 the Minister of Finance issued a binding regulation setting the SyRB at 3% applicable from 1 January 2018 onwards without a phase-in period.

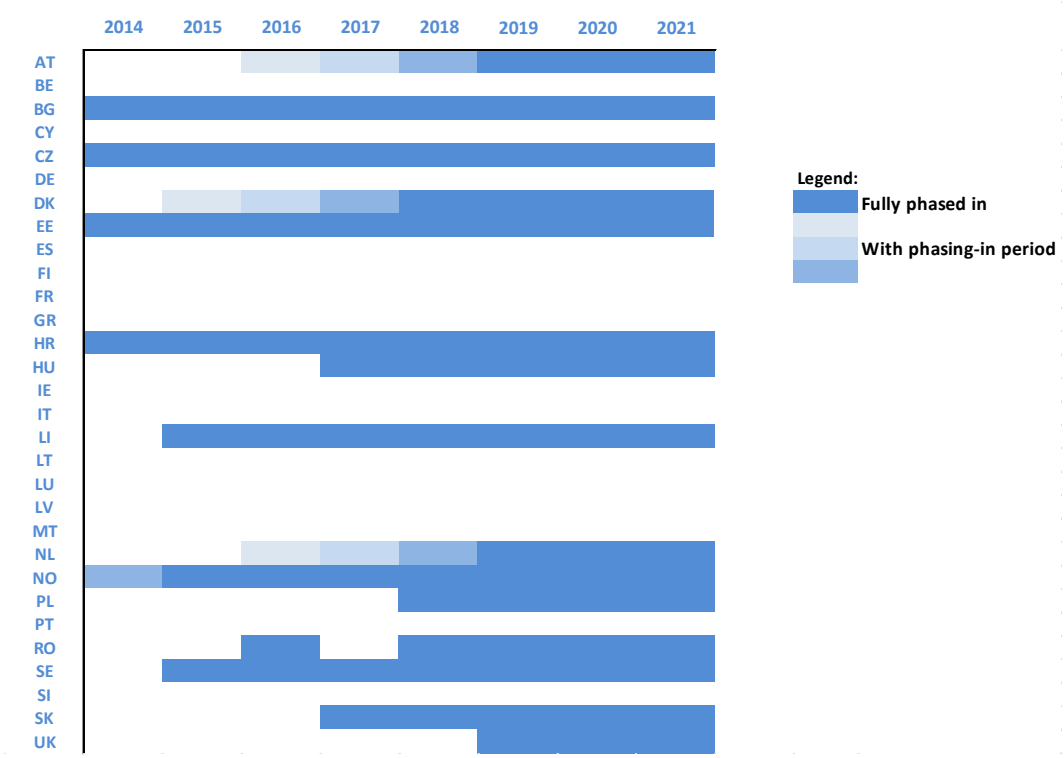
**Romania** deactivated its SyRB on 1 March 2017 and decided on a new SyRB in December 2017, which will be applicable from June 2018 onwards. The first SyRB was introduced in 2016 to address the external contagion risk resulting from certain bank ownership structures. Its deactivation is related to the perceived reduction in this contagion risk, the activation of the O-SII buffer and national legislative developments that may result in a lower capital adequacy of banks.

The new SyRB addresses the risk related to a reversal in the trend of banks' NPL ratios and a tightening of domestic macroeconomic equilibria. The SyRB aims at ensuring an adequate credit risk management process regarding NPLs, which could rise following an increase in the interest rates or a slowdown in the balance sheet clean-up process of banks. Furthermore, changes in the domestic legal framework could potentially have adverse effects on the management of risks in the banking sector. The buffer rate of 1% applies to banks which either have an NPL ratio above 5% or have a coverage ratio below 55%. For banks which fulfil both conditions a buffer rate of 2% applies. The SyRB is applied to all exposures and will be applicable from 30 June 2018 onwards without a phase-in period.

**Slovakia** combines the SyRB, imposed on domestic exposures with the O-SII buffer to achieve a target aggregate buffer for O-SIIs. Following the change in the methodology for the O-SII buffer, the targeted buffers for these institutions were recalibrated. Due to the constraints stemming from the O-SII buffers applied to the parent banks of these institutions in their home countries (AT, BE, IT), a SyRB of 1% was set for three institutions effective from 1 January 2018 onwards.

Figure 12

**Phasing in of the systemic risk buffer in Europe**




Source: ESRB.

Notes: Romania decided to deactivate the SyRB from 1 March 2017 onwards and to activate a new SyRB from 30 June 2018 onwards. The United Kingdom has legislated for the SyRB to be implemented in 2019. The PRA has said that it will announce specific rates in early-2019 with application three months after the date of announcement.

Table 3

**Main features of the systemic risk buffer in Europe**

*(situation on the basis of decisions approved until end-2017, level refers to fully phased in buffers)*

| Member State | Level | Calculation basis | Main motivation | (First) Implementation |
|---|---|---|---|---|
| Austria | 2 rates: 1% and 2% | Thirteen banks[36]<br>All exposures<br>(Sub-)consolidated | Systemic vulnerability<br>Systemic cluster risk | 2016-19 |
| Bulgaria | 3% | All banks<br>Domestic exposures<br>Individual, solo and (sub-)consolidated | Presence of currency board and impact for monetary and fiscal policy<br>To improve the resilience of the banking sector | 2014 |
| Croatia | 2 rates: 1.5% and 3% | All banks<br>All exposures<br>Solo and (sub-)consolidated | Systemic risk resulting from O-SIIs<br>Macroeconomic imbalances<br>Features of real estate markets and role of real estate as collateral<br>High concentration in the banking sector | 2014 |
| Czech Republic | 3 rates: 1%, 2% and 3% | Five banks identified as SIIs[37]<br>All exposures<br>Solo level | Systemic risk resulting from highly concentrated banking sector and common sectoral exposure | 2014 |
| Denmark | 5 rates: 1%, 1.5%, 2%, 2.5% and 3%<br><br>2 rates: 0% and 1% | Six banks identified as O-SIIs[38]<br>All exposures<br>Solo and (sub-)consolidated<br><br>All banks<br>Domestic exposures to the Faroe Islands | Systemic risk resulting from O-SIIs<br><br>Vulnerabilities of the Faroe Islands' economy with possibility of an adverse scenario impacting exposed Danish banks | 2015-19<br><br>2018 |
| Estonia | 1% | All banks<br>Domestic exposures<br>Solo and (sub-)consolidated | Structural vulnerabilities of the economy: a small and open economy, high proportion and concentration of exports and investments, large indebtedness of the non-financial sector, modest financial buffers of households, bank-centred financial sector | 2014 |
| Hungary | 4 rates: 0%, 1%, 1.5% and 2% | All banks, but buffer rate depends on the ratio of the bank's problem CRE exposures to its capital[39]<br>Domestic exposures<br>(Sub-)consolidated | Systemic risk resulting from problem exposures to the CRE sector (non-performing project loans and held-for-sale CRE) | 2017 |
| Liechtenstein | 2.5% | Three banks identified as O-SIIs<br>All exposures<br>Consolidated level | Structural vulnerabilities of a small open economy. amplified by the importance and concentration of the banking sector | 2015 |
| Netherlands | 3% | Three largest banks[40]<br>All exposures<br>Consolidated | Systemic risk resulting from SIIs | 2019 |
| Norway | 3% | All banks<br>All exposures<br>Solo and consolidated | Structural vulnerabilities: one-sided industry structure, pronounced cyclical fluctuations, high levels of household debt, housing market pressures and a closely interconnected financial system dependent on foreign capital | 2013-14 |
| Poland | 3% | All banks<br>Domestic exposures<br>Individual and consolidated | Heightened uncertainty regarding growth due to external factors | 2018 |
| Romania | 1%<br><br>3 rates: 0%, 1% and 2% | All banks with a parent bank based in a non-investment-grade country<br>All exposures<br>Solo and (sub-)consolidated<br><br>24 banks identified based on the level of the NPL ratio and the coverage ratio[41]<br>All exposures | Contagion risk resulting from ownership structure (parent bank based in a non-investment-grade country)<br><br>Potential increase in NPL ratios following a rise in interest rates and a slowdown in the balance sheet clean-up process. Tensions surrounding macroeconomic equilibria | 2016 (deactivation starting 01/03/17)<br><br>2018 |

36 Erste Group Bank, Raiffeisen Bank International, Unicredit Bank Austria, Raiffeisenlandesbank Oberösterreich, Raiffeisen-Holding Niederösterreich-Wien, BAWAG P.S.K., HYPO NOE Gruppe Bank, Vorarlberger Landes- und Hypothenbank, Hypo Tirol Bank, Oberösterreichische Landesbank, Sberbank Europe, Volksbanken Verbund, Deniz Bank.

37 Česká spořitelna, Československá obchodní banka (ČSOB), Komerční banka, Unicredit Bank Czech Republic and Slovakia, Raiffeisenbank.

38 Danske Bank, DLR Kredit, Jyske Bank, Nordea Kredit (replacing Nordea Bank Danmark from 2017 onwards following the merger between Nordea Bank Danmark and Nordea Bank AB), Nykredit Realkredit, Sydbank.

39 CIB Bank Zrt., Raiffeisen Bank Zrt.

40 ABN Amro Bank, ING Bank, Rabobank.

41 Alpha Bank Romania, Banca Comercială Română, Banca Comercială Feroviara, Bank Leumi, Bancpost, BRD - Groupe Société Générale, Banca Românească, Banca Transilvania, Crédit Agricole Bank, Credit Europe Bank, CEC Bank, Eximbank, Garanti Bank, Idea Bank, Banca Comercială Intesa SanPaolo, Libra Internet Bank, Marfin Bank Romania, Patria Bank, OTP Bank, Piraeus Bank, Porsche Bank, ProCredit Bank, Raiffeisen Bank, UniCredit Bank.

| | | | | |
|---|---|---|---|---|
| **Slovakia** | 1% | Three banks identified as O-SIIs[42]<br>Domestic exposures<br>Solo and (sub-)consolidated | Importance of the banking sector<br>High concentration in the banking sector<br>Small and open economy | 2017-18 |
| **Sweden** | 3% | Four largest banks[43]<br>All exposures<br>Consolidated | Systemic risk resulting from SIIs<br>Features of the banking sector: similarity of business models, high common exposures, high interconnectedness, high concentration | 2015 |

Source: ESRB.
Notes: Romania decided to deactivate its SyRB from 1 March 2017 onwards. The United Kingdom has legislated for the SyRB to be implemented in 2019. The PRA has said that it will announce specific rates in early-2019 with application three months after the date of announcement. Poland's SyRB will come into effect on 1 January 2018.

## 7. Capital buffers for systemically important institutions

**Following the annual O-SII identification process, several changes were made in 2017 to the list of O-SIIs and the SII frameworks.** Member States are to identify O-SIIs and G-SIIs on a yearly basis. In total, 202[44] SIIs have now been identified in the EU (including Norway, Iceland and Liechtenstein), ranging from 16 in the UK to three in EE, MT and the three EEA countries (Figure 13). A very large majority of these institutions are credit institutions but there are also four investment firms in Cyprus (decrease by two firms compared to 2016). The total number of O-SIIs changed in only 14 countries but the list of identified institutions or O-SII buffer levels changed in 18 countries (see Table 4 and Figure 13). These changes are often the result of corporate restructurings (mergers or changes of subsidiaries to branches), changes in the systemic risk score of institutions or in the methodology for setting the O-SII buffers[45] (see Table 4).

**The number of EU-based G-SIIs decreased by one institution.**[46] Compared to last year, the French Groupe BPCE was deleted from the list of G-SIIs but continues to be an O-SII. There are currently 12 G-SIIs in the EU, located in the five largest Member States (DE, ES, FR, IT, UK) as well as the Netherlands and Sweden. All G-SIIs have also been identified as O-SIIs in their home markets.

42 Všeobecná úverová banka, Slovenská sporitelňa,Tatra banka.

43 Handelsbanken, Nordea, SEB, Swedbank.

44 The same number as in 2016.

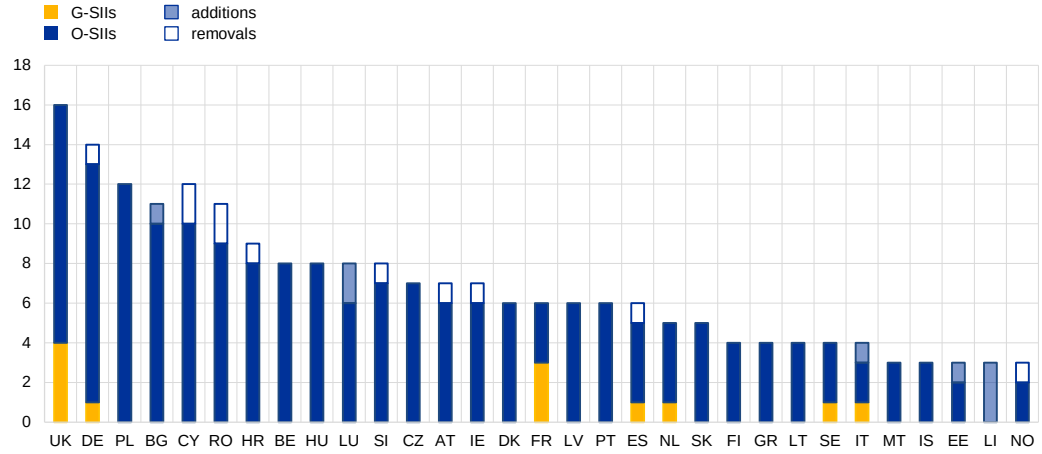
45 The ECB adopted a methodology for assessing O-SII buffers set by national authorities, in line with its responsibilities under Article 5 of Council Regulation (EU) No 1024/2013 of 15 October 2013 conferring specific tasks on the ECB concerning policies relating to the prudential supervision of credit institutions.

46 G-SIIs are identified at the global level following a methodology laid down by the BCBS. The list of G-SIIs for 2017 is available at: **http://www.fsb.org/2017/11/fsb-publishes-2017-g-sib-list/**

Figure 13

**Number of systemically important institutions by Member State**

*(as notified to the ESRB for 2017)*




Source: ESRB.

Notes: In the case of qualification as both a G-SII and an O-SII, the institution has been allocated to the G-SII category. Additions and removals show the changes to the total number of O-SIIs in each Member State made in 2017. The removals result either from the fact that an institution previously identified as an O-SII was not identified as an O-SII in 2017, due to its acquisition or merger with another institution, or due to liquidation or resolution. The changes shown result from notifications received in 2017 regardless of the date of application. The G-SII/O-SII identifications are to take effect immediately or in the near future.

Table 4

**Changes in the list of SIIs and/or SII buffer levels notified in 2017 compared to 2016**

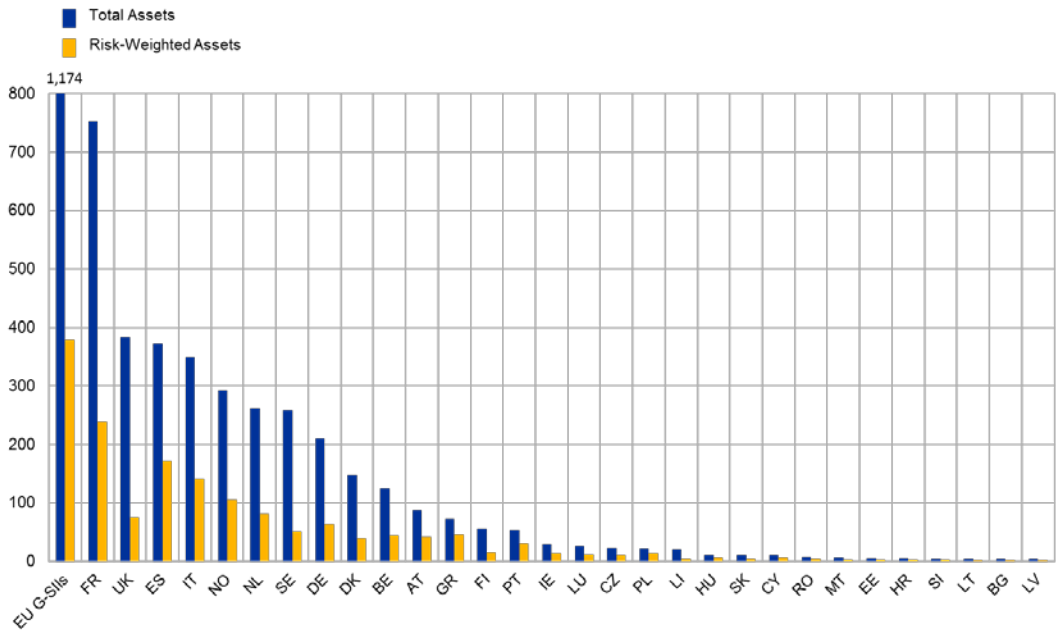
| Member State | Changes |
|---|---|
| **Austria** | • Removal of one institution from the O-SII list due to a local merger |
| **Bulgaria** | • Addition of one institution to the O-SII list with both a fall and a rise in the fully phased in buffer for two other O-SIIs |
| **Croatia** | • Removal of one institution from the O-SII list and a rise in the fully phased in buffer for one O-SII |
| **Cyprus** | • Addition of one institution to the O-SII list and the removal of three. A rise in the rate of the fully phased in buffer for two O-SIIs and a fall in the rate of the fully phased in buffer for two other O-SIIs |
| **Estonia** | • Addition of one institution to the O-SII list |
| **Finland** | • Addition of one institution to the O-SII list and the removal of another one due to its transformation into a branch. A rise in the rate of the fully phased in buffer for one O-SII |
| **France** | • Removal of one institution from the G-SII list and a fall in the fully phased in buffer for another G-SII |
| **Germany** | • Removal of one institution from the O-SII list |
| **Iceland** | • First notification to the ESRB on O-SIIs and their respective buffer levels, but unchanged |
| **Ireland** | • Removal of one O-SII from the list with an increase in the fully phased in buffer for one O-SII |
| **Italy** | • Addition of one institution to the O-SII list |
| **Latvia** | • Conversion of AS DNB Banka to Luminor Bank AS with a fall in the fully phased in buffer for one O-SII |
| **Liechtenstein** | • First notification to the ESRB on O-SIIs and their respective buffer levels |
| **Lithuania** | • Merger of the operations of the Nordea branch and the DNB subsidiary into Luminor Bank AB, Luminor Bank AB replaced AB DNB bank in the O-SII list but unchanged |
| **Luxembourg** | • Addition of three institutions to the O-SII list and the removal of one due to its transformation into a branch. A fall in the fully phased in buffer for one O-SII following a reduction of its balance sheet |
| **Netherlands** | • Addition of one institution from the O-SII list and the removal of another |
| **Norway** | • Removal of Nordea Bank Norge ASA due to its transformation into a branch |
| **Poland** | • Addition of one institution to the O-SII list and the removal of another. A rise in the fully phased in buffer for one O-SII and a fall for another |
| **Portugal** | • An extension of the phase-in period for all O-SIIs |
| **Romania** | • Removal of two institutions from the O-SII list |
| **Slovakia** | • A fall in the fully phased in buffer for two O-SIIs |
| **Slovenia** | • Removal of one institution from the O-SII list with a fall in the fully phased in buffer for one O-SII |
| **Spain** | • Removal of one institution from the O-SII list as a result of its acquisition by another O-SII/G-SII |

Source: ESRB.
Notes: Changes in buffer levels resulting from phasing-in arrangements are not included. No changes made by Belgium, Denmark, the Czech Republic, France (O-SII), Germany (G-SII), Greece, Hungary, Malta, Spain (G-SII), Sweden (O-SII & G-SII) and the United Kingdom (O-SII and G-SII). The changes shown result from notifications received in 2017 regardless of the date of application. The G-SII/O-SII identifications are to take effect immediately or in the near future. In the case of Cyprus, two sets of O-SIIs are identified, depending on whether an O-SII is classified as a credit institution or an investment firm.

**The characteristics of O-SIIs vary considerably across countries, reflecting their domestic character.** The characteristics of the O-SIIs have not changed significantly compared to the previous year. Generally, larger countries also have larger O-SIIs, although some smaller countries, such as the Netherlands and Sweden, are the exception to this rule (Figure 14). The average size of G-SIIs is significantly larger than that of O-SIIs reflecting their global character. Special Feature C reviews in greater detail how the O-SII buffer is applied across Member States.

Figure 14
**Average total assets and average risk-weighted assets of G-SIIs and O-SIIs by Member State**

*(euro billions)*




Source: ESRB calculations on the basis of SNL data for end-2016.
Notes: The figure is based on institutions identified as O-SIIs in 2017. The true average value of the total assets of EU-based G-SIIs is €1,174 billion. G-SIIs are excluded from the computation of country average values for O-SIIs.

**While O-SIIs are identified at the domestic level, 77 of them are part of larger cross-border banking groups, in most of which the controlling entity is an O-SII or a G-SII located in another Member State.** Figure 15 and Annex 4 illustrate these cross-border linkages, which from a financial stability perspective might be potential transmission channels for risks. Twenty-six cross-border O-SII or G-SII groups can be identified, the same number as in 2016.[47] The National Bank of Greece dropped from the list following the sale of the United Bulgarian Bank to KBC Group. DNB dropped from the list following the merger of its Latvian and Lithuanian operations with Nordea under the new Luminor bank. The Spanish group CaixaBank and the Royal Bank of Scotland group were added to the list following CaixaBank's acquisition of the Portuguese Banco BPI and the identification of the Ulster bank Ireland subsidiary of the Royal Bank of Scotland as an O-SII.

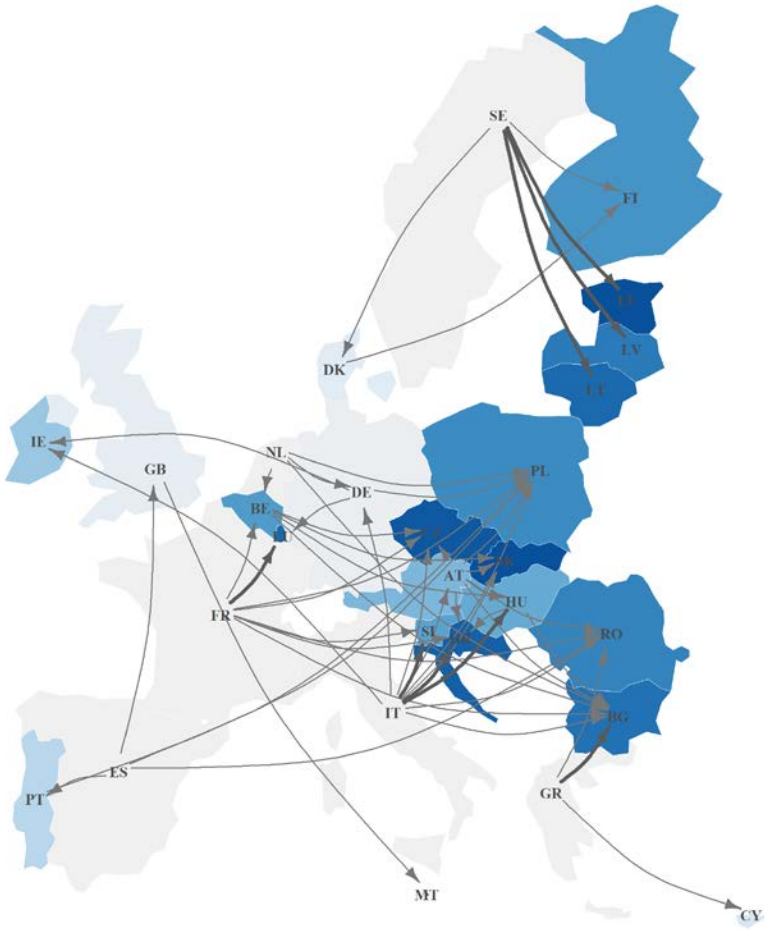
Eight of these groups control only one O-SII subsidiary in another Member State, while the remaining 18 control two to nine O-SII subsidiaries. Groups with a particularly strong cross-border

[47] The actual number of groups listed in Annex 4 in this Review decreased by two groups compared to the list published in 2017 due to a change in the methodology used to form the list of groups.

presence through many SIIs continue to be Unicredit (9 O-SII subsidiaries), Raiffeisen (7), Erste (5), KBC (5) and Société Générale (5). There are only four O-SIIs[48] which are subsidiaries of a parent that itself has not been identified as an O-SII or a G-SII.

**The geographical patterns of these cross-border interlinkages did not change significantly over the past year.** In one group of countries (DE, ES, FR, GR, IT, NL, SE, UK) the identified O-SIIs have O-SII subsidiaries in other Member States; the share of O-SIIs owned by foreign groups is low or zero in these countries. In another group of countries (AT, BE, DK, PT), by contrast, the share of foreign-owned O-SIIs is higher, but there are also domestic banks which control foreign O-SIIs; the latter are predominately located in the Baltics and central, eastern, south-eastern Europe and smaller EU Member States and their share often exceeds 50% of the domestic banking sector.

Figure 15
**Cross-border links between Member States through the presence of SIIs**



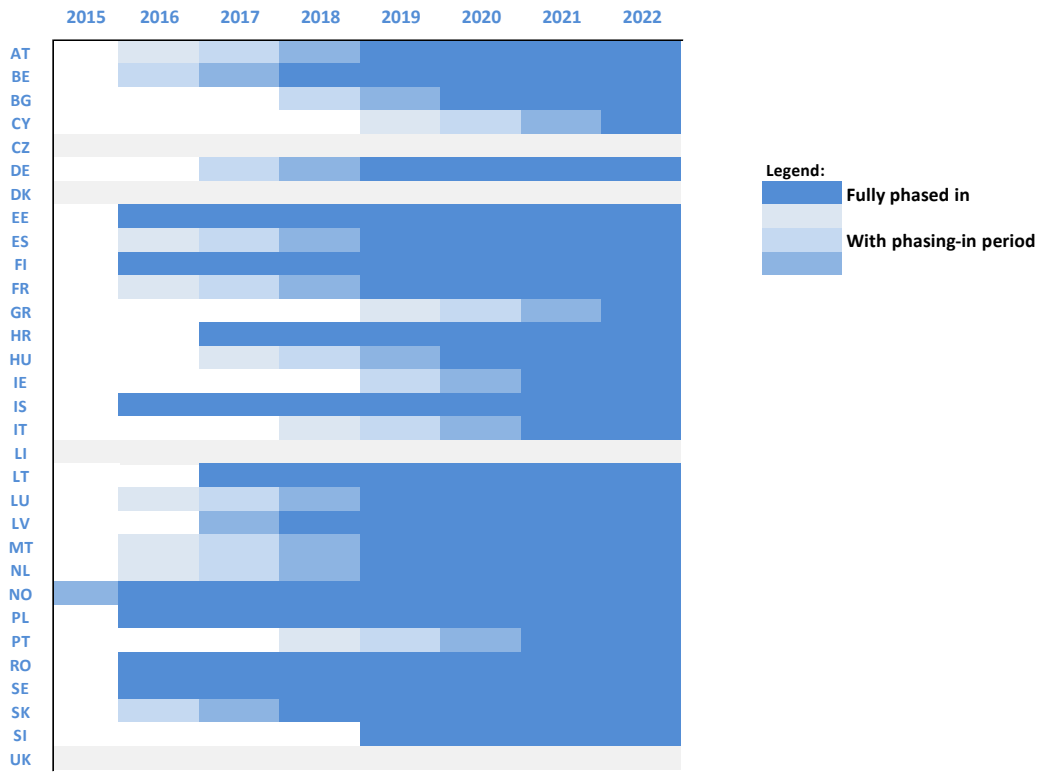

Source: ESRB and SNL (ownership and total assets).
Notes: The arrow between countries indicates the link between the home country of SIIs and another country in which they control SIIs (host country). The thickness of the arrow is proportional to the number of such links. The colour of a country reflects the share of its banking market controlled by foreign-owned SIIs (the darker the colour, the larger the share based on total assets).

[48] Addiko Bank and Sberbank (both Croatia), Sberbank banka (Slovenia) and Axa Bank Europe (Belgium).

**Given the legal caps on the O-SII buffer, Members States use different instruments to reach the target buffer level for O-SIIs.** There are marked differences across Member States as to the level and dispersion of capital buffer rates applied to O-SIIs. Ideally, the dedicated instrument (the O-SII buffer) should be used to address the systemic risk posed by O-SIIs. However, this is not always possible or desirable and in practice national authorities also use other instruments (see Special Feature C).

**While Union law fixes the phasing-in of the G-SII buffer requirements from 2016 to 2019, the phasing-in of the O-SII buffer is flexible so that the national situation can be taken into account**. Most countries opt for a phasing-in over a period of two to four years, but the length and start of the phase-in period differ (Figure 16). In 2017, four additional countries (DE, HU, LV, SI) started with the phasing-in of the O-SII buffer and Croatia and Lithuania implemented a fully loaded O-SII buffer without a phasing-in period. Six other countries have not yet started the phasing-in. Portugal extended the phase-in period to 2021 and Italy introduced for its newly identified O-SII a phase-in period of four years (from 2019 to 2022).

Figure 16
**Phasing in of O-SII buffer requirements**




Source: ESRB.
Notes: The Czech Republic, Denmark and Liechtenstein apply a systemic risk buffer to their O-SIIs rather than an O-SII buffer. Norway is a similar case, although the country has not yet formally implemented the CRD IV/CRR into national legislation; for the purposes of this figure, this systemic risk buffer has been considered an O-SII buffer. The United Kingdom has not yet set a buffer for O-SIIs. For Cyprus, the phase-in illustrated is for credit institutions identified as O-SIIs.

## 8. Other measures

### 8.1 Consumer loans

**In November 2017, Slovakia decided on measures related to consumer loans to be implemented from 2018 onwards.** The country is confronted with very strong credit growth, in

particular for household lending. It has already taken several macroprudential measures to address the related financial stability concerns, including the use of the CCyB (see Section 4.1) and various housing loan limits (see Section 5)[49]. However, for these measures to be fully effective and avoid circumvention, NBS was of the view that they needed to be extended to consumer loans and therefore decided to introduce binding limits on the DSTI ratio (in principle 80%) and the maturity (eight years) for new consumer loans; these limits will apply to all consumer loan providers, irrespective of whether they are domestic or foreign.

### 8.2 Non-performing loans

**Malta Financial Services Authority introduced a measure for credit institutions to reduce their ratio of non-performing loans (NPLs) to less than 6%.** Credit institutions are required to draft an NPL reduction plan for the next five-year period; if divergences from the plan are registered they will be compelled to hold additional reserves. The definition of a specific threshold for the NPL ratio gives this measure significant macroprudential features[50]. The measure should help to minimise the impact of externalities and the systemic implications of NPLs through a better allocation of credit and capital. Romania introduced a SyRB, the level of which will be determined by the NPL ratio and provisions coverage ratio of banks (see Section 6).

### 8.3 Leverage ratio

**The UK's Financial Policy Committee (FPC) increased the minimum leverage ratio requirement from 3% to 3.25%.** The change is more of a technical nature rather than the result of a tighter macroprudential policy. The FPC excluded claims on central banks that are matched by deposits of the same currency and greater than or equal maturity from the calculation of total exposures in the leverage ratio. The purpose of this exclusion was to ensure that the leverage ratio does not act as a barrier to the effective implementation of any monetary policy measure that leads to an increase in claims on central banks. At the same time, the FPC wanted to maintain the existing level of resilience delivered by the leverage ratio framework, which resulted in the upward calibration of the leverage ratio minimum requirement.

### 8.4 Liquidity measures

**Cyprus implemented a gradual easing of its national prudential liquidity requirements with the aim of ensuring a smooth transition to the liquidity coverage requirement (LCR) under Union law.** European prudential rules require Member States to fully phase in the LCR as from 1 January 2018 onwards. Until the end of 2017, Cyprus had national prudential liquidity requirements in place that were computed on the basis of a different methodology than the LCR and which turned out to be substantially more stringent than the latter on aggregate. The specificities of these national requirements were driven by the banking sector's high reliance on customer deposits and Central Bank of Cyprus's view that the LCR does not sufficiently address the inherent risk in particular categories of such deposits.

In order to ensure a smooth transition to the compulsory LCR, Cyprus started gradually relaxing its national prudential liquidity requirements in the course of 2017. Furthermore, it proposed implementing a macroprudential liquidity buffer on top of the LCR for the year 2018 using Article 458 of the CRR. The ESRB issued an opinion on the latter measure as required by the Article. This opinion expressed the view that the important cliff-edge effects following the transition to the new liquidity regime could pose financial stability risks and thus justified the measure. Taking into

[49] See also *A Review of Macroprudential Policy in the EU in 2016*, ESRB, April 2017, p. 24.

[50] For the microprudential angle, see the *Guidance on non-performing loans*, ECB, March 2017.

account the ESRB opinion, the Commission decided not to propose to the EU Council to reject the planned measure.

**Hungary initiated the process of introducing a back-stop funding requirement in the form of a cap on the interbank funding ratio.** This ratio would take the form of the weighted sum of the bank's liabilities originated from all financial corporations divided by the bank's balance sheet total (excluding own funds) and would be limited at 30%. The aim of the measure is to prevent the build-up of a bank's excessive reliance on wholesale funding from financial corporations, which proved to be volatile and an important potential channel of contagion during the last financial crisis. The intended date of activation of the measure is 1 July 2018.

**Slovenia eased its loans-to-deposits (LTD) type ratio introduced earlier.** This so-called gross loans to deposits flows ratio was introduced in June 2014 as a binding measure with the aim of slowing down the decline in banks' LTD ratio[51]; it also aimed at stabilising banks' funding structure and reducing systemic liquidity risk. To achieve these aims, a minimum requirement was introduced for banks regarding changes in their loans to the non-banking sector in relation to changes in their deposits collected from the non-banking sector; at the same time, banks were given the alternative of increasing their liquidity buffers. Since the LTD ratio of the banking sector had stabilised over time, Banka Slovenije decided to replace the binding measure by a non-binding recommendation. Preserving the measure as a non-binding recommendation signals to the credit institutions that the second objective of stabilising their funding structure is not yet fully achieved.

### 8.5 Measures related to non-bank financial institutions

**In 2017, Banca Naţională a României adopted macroprudential measures to address the risk stemming from the sector of non-bank financial institutions.** The central bank deemed that a strengthening of regulations was necessary given the growing share of loans granted by non-bank financial institutions. Two new criteria are introduced that need to exceed certain thresholds for such institutions to become subject to the central bank's prudential supervision and to be listed in a special register. These criteria refer to (i) the volume of new loans, in order to capture the activity of lenders that focus on short-term and very short-term loans; and (ii) the average interest rate applied (in terms of annual percentage rate of charge or APRC). In addition, for institutions granting less prudent loans (i.e. at APRC levels above specified thresholds), requirements for holding additional capital were introduced. The new requirements are only applicable to loans granted from 1 October 2017 onwards.

## 9. Cross-border lending and reciprocity

### 9.1 Cross-border lending in Europe

#### a) Considerations regarding the mapping of cross-border loans

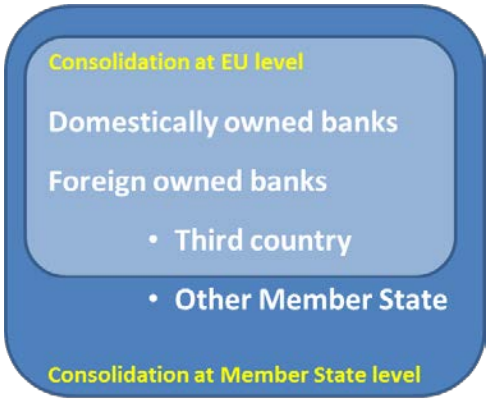
**Cross-border lending can take different forms.** Banks can provide such loans either via subsidiaries and branches or by operating directly across borders without being physically present in the destination country. In fact, the passporting system in the EU allows banks authorised in one Member State to provide their services in any other Member State without having to be separately authorised in that Member State.

[51] On this measure, see also *A review of macroprudential policy in the EU one year after the introduction of the CRD/CRR*, ESRB, June 2015, pp. 12 and 24.

**Views differ on whether a loan that is granted locally by a foreign-owned subsidiary should be considered a cross-border loan or not.** The ESRB has opted so far for a broad "ownership-based" view: a loan that is provided to a borrower in one Member State and that is ultimately owned by a parent in another Member State is considered to be a cross-border loan ("broad definition").[52,53] A foreign-owned subsidiary is, however, incorporated in the Member State where it resides and is supervised by that Member State. It is also often funded by local deposits. Hence, in an alternative definition, the local loans by foreign-owned subsidiaries are considered local, and cross-border loans comprise only direct cross-border loans and loans provided by foreign branches ("narrow definition").[54] While the cross-border loans in this narrow definition are generally not covered by macroprudential measures in the receiving country, the domestic loans (i.e. loans extended by domestically owned banks and subsidiaries of foreign banks) are subject to such measures (see Section 9.2).The choice of definition of cross-border loans depends to a large extent on the consolidation level of the available data (see below).

Figure 17

**Attribution of local banks to a Member State under different consolidation levels**




Source: ESRB.
Note: The figure shows which entities (and their exposures) located in a given Member State are attributed to that Member State under different consolidation levels.

**The consolidation level of data available to map cross-border loans is one of the determining factors of what is considered to be a cross-border loan (Figure 17).** If data consolidated at the EU level is used, loans are attributed to the EU parent (and therefore to the Member State in which the EU parent resides), corresponding to the broad ownership-based definition of cross-border loans. If, however, data consolidated at the Member State level is used, loans of subsidiaries of a parent in another Member State are attributed twice: the loans provided by the subsidiary locally are classified as: (i) local loans for the Member State in which the subsidiary resides; and (ii) cross-border loans for the Member State in which the EU parent of the subsidiary resides.[55,56] This double-counting leads to a "mixed definition" of cross-border loans and does not allow the summing up of Member State loans to arrive at a total EU loan amount. In the case of the two different consolidation levels, subsidiaries of parents residing in a third country are treated similarly, i.e. they are attributed to the Member States in which the subsidiaries reside.

**In what follows, data consolidated at the Member State level and the corresponding mixed definition of cross-border loans are used.** Hence, the exposures of subsidiaries are attributed both to the Member State in which the EU parent resides and to the Member State in which the subsidiary resides. Owing to the double-counting of the exposures held by subsidiaries of EU

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52 See Chapter 11 of the **ESRB Handbook on Operationalising macroprudential policy in the banking sector**, Section 3.2.4 in the 2014 Annual Report, and Special Feature B in the Review of Macroprudential Policy in the EU in 2016.

53 The ESRB uses data on credit exposures to map cross-border loans.

54 In a further, even narrower definition, only direct cross-border loans are counted.

55 As is the case with the broad definition of cross-border loans, this narrow definition does not take into account where the funding that backs these loans is raised. A complete financial stability assessment can therefore not be made without further information, as the conclusion will also depend on whether the exposure is funded locally or not.

56 Alternatively, locational data can be used, in which also exposures of local branches are attributed to the country in which the branch resides. Hence, only direct cross-border loans are counted as cross-border loans when using locational data.

parents, an EU figure cannot be calculated based on the information on Member States. Instead, figures for the average EU Member State can be derived.

**Furthermore, the perspective of the originating country is taken.** When analysing cross-border loans, two different perspectives can be taken, i.e. the one of the originating country and the one of the receiving country. The absolute loan amount between two countries does not allow for a sensible interpretation without relating it for example to the size of the relative market in the originating and receiving country. In that way, the importance for the two countries can be gauged. In the remainder of this section, the perspective of the originating Member State is taken. For the perspective of the receiving Member State, see Special Feature B in last year's Review and Special Feature A in this edition.

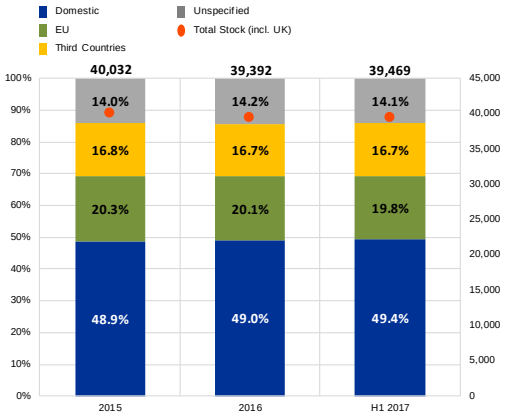
### b) Significance of cross-border lending for originating Member States

**This section uses data from the ECB's consolidated banking data.** Hence, the data cover generally the entire banking systems of all Member States.

Figure 18

**Average geographical breakdown of credit exposures of banks in the EU, 2015 - 2017**

*(percentages, euro billions)*




Sources: ECB Consolidated Banking Data, ESRB calculations.
Notes: The data include total original exposures for credit, counterparty credit and dilution risk, equity exposures and free deliverables. The data are reported at the highest level of consolidation in the EU for the absolute figure reported above the bars and at the level of Member States for the shares within the bars. The figure provides the shares of bank exposures to: (i) the same Member State in which the bank resides ("domestic"); (ii) any other EU Member States ("EU"); (iii) countries outside the EU ("third countries"); and (iv) an unspecified residual, as a percentage of total exposures of EU banks. Percentages are derived as weighted averages for Member States (without the UK). Exposures to other Member States are reported only by banks that have significant foreign exposures (more than 10% of total exposures). Exposures to third countries contain exposures to a list of 17 third countries and are reported only by banks that have significant foreign exposures (more than 10% of total exposures). The unspecified residual contains equity exposures and securitisations, for which a geographical breakdown is not available, as well as exposures to third countries that are not among the 17 listed third countries for banks with significant foreign exposures (more than 10% of total exposures). Total exposures of banks with foreign exposures lower than 10% of total exposures (below the reporting threshold) are allocated to the domestic exposures (except for Germany where, due to the structure of the national banking system with a significant number of small banks with their less detailed reporting obligations, such exposures are allocated to the unspecified residual). Owing to partial information for Italy, the domestic exposure for 2015 is derived solely from Q4 2015, whilst, for 2016 and H1 2017, the domestic exposure for Q4 2016 and Q2 2017, respectively, is utilised. Owing to partial information for the UK, exposures for 2015 and 2016 utilise the UK's contribution to the EU banking sector based on H1 2017. In addition, the figure provides the total exposures by EU banks in EUR billions.

**Cross-border lending is important for the originating Member States, with half of the exposures of EU banks on average held outside the originating Member State (Figure 18).** Originating banks incorporated in the average Member State, i.e. domestic banks and subsidiaries of foreign banks, hold about 49% of their exposures in the Member State in which they reside ("domestic exposures"),[57] whereas 20% and 17% can be attributed to exposures to other Member States and to third countries, respectively. While part of the remaining 14% also contains exposures to third countries, the exact share is unknown and can therefore not be attributed accordingly (see notes under Figure 18). These shares have been quite stable over the last three years.

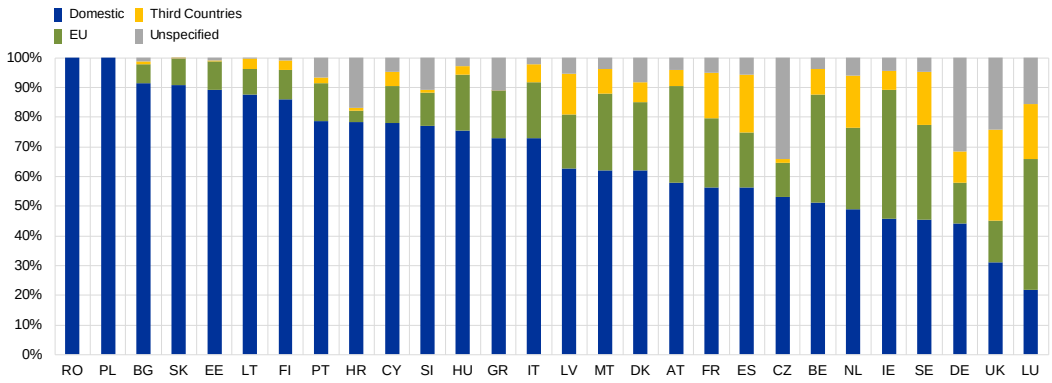
**These EU figures mask a large heterogeneity across originating Member States (Figure 19).** Foreign exposures range from as low as (almost) 0% in Romania and Poland to as high as about 50% in Spain and Sweden and 63% in Luxembourg. Banks incorporated in nine Member States hold close to or more than 40% of their exposures abroad. These exposures are mostly held in other Member States. Only banks incorporated in two Member States (Spain and the United Kingdom) lend more to third countries than to other Member States. The overall exposure of EU banks is concentrated in a few third countries (see Figure 6 in Section 4.2), although banks in individual Member States are exposed to a multitude of third countries (see Table 2 in Section 4.2).

[57] The analysis in this section uses data consolidated at the EU level. Domestic banks therefore include entities controlled by foreign non-EU countries, but not subsidiaries of banks in other Member States.[58] The dataset provided by the EBA are country aggregates calculated on the basis of a sample of about 200 individual banks in the EU, comprising domestic banks and subsidiaries of foreign banks. The country aggregates are based on at least three reporting banks, otherwise no data are reported (which is the case for CZ, PL, RO and SK).

Figure 19

**Geographical breakdown of credit exposures of domestically owned banks by Member State, Q2 2017**

*(percentages)*




Sources: ECB Consolidated Banking Data, ESRB calculations.
Notes: The data include total original exposures for credit, counterparty credit and dilution risk, equity exposures and free deliverables. The data are consolidated at the level of Member States, i.e. exposures by subsidiaries of EU parent banks are shown twice: (i) as domestic exposures in the Member State where the subsidiary is incorporated; and (ii) as cross-border EU exposures in the Member State where the parent bank is located. The figure provides the shares of bank exposures that are provided to: (i) the same Member State in which the bank resides ("domestic"); (ii) any other EU Member States ("EU"); (iii) countries outside the EU ("third countries"); and (iv) an unspecified residual, as a percentage of total exposures by domestically owned banks, subsidiaries of EU parent banks and entities controlled by non-EU parents in that Member State. Exposures to other Member States are reported only by banks with significant foreign exposures (more than 10% of total exposures). Exposures to third countries contain exposures to a list of 17 third countries and are reported only by banks with significant foreign exposures (more than 10% of total exposures). The unspecified residual contains equity exposures and securitisations, for which a geographical breakdown is not available, as well as exposures to third countries that are not among the 17 listed third countries for banks with significant foreign exposures (more than 10% of total exposures). Total exposures of banks with foreign exposures lower than 10% of total exposures (below the reporting threshold) are allocated to domestic exposures (except for Germany where, due to the structure of the national banking system with a significant number of small banks with their less detailed reporting obligations, such exposures are allocated to the unspecified residual). Data for banks incorporated in the United Kingdom are for H1 2017.

### c) Sectoral breakdown of cross-border lending of originating Member States

**This section exploits an EBA dataset newly available to the ESRB and provides a sectoral breakdown of cross-border loans.**[58] This dataset therefore allows a more granular mapping of cross-border linkages. However, its coverage is less comprehensive than the ECB's consolidated banking data used above: first, the EBA dataset is based on a sample of about 200 large EU banks, while the ECB data used in the earlier analysis covers the whole banking sector; and second, the EBA dataset provides data for the banking sectors of 24 Member States only.

**The analysis confirms the large heterogeneity in the shares of domestic, cross-border EU and cross-border third-country exposures across banks in the different Member States, while the difference in shares reported in Figure 19 and Figure 20 is driven by differences in underlying samples.** While the EBA sample aims at ensuring the representativeness of the data for the whole banking sector, smaller banks, which tend to focus more on local loans, are not represented. Hence, for Member States where the sampled banks represent a lower share of the banking sector, the share of cross-border lending will be overrepresented. For instance, the Spanish banking sector holds domestic exposures of roughly 55%, while the large Spanish banks represented in the EBA sample hold only about 35% domestic exposures and are therefore much more active abroad.

**Breaking the domestic and EU exposures down by sectors reveals some patterns despite large heterogeneity across Member States (see Figure 20).**

[58] The dataset provided by the EBA are country aggregates calculated on the basis of a sample of about 200 individual banks in the EU, comprising domestic banks and subsidiaries of foreign banks. The country aggregates are based on at least three reporting banks, otherwise no data are reported (which is the case for CZ, PL, RO and SK).

- **Lending to central governments – very large home bias.** Banks incorporated in 19 (17) Member States (out of the 24 for which data are available) lend more to their domestic governments than to the governments in all other Member States (in all other countries[59]) combined.
- **Lending to financial institutions – very large foreign bias.** Banks incorporated in 18 (22) Member States lend more to financial institutions in other Member States (in all other countries) than to financial institutions within the same Member State. The most extreme case are banks in Luxembourg, which lend 1% to domestic financial institutions and about 35% (5%) to financial institutions in other Member States (in third countries).
- **Corporate lending – home bias.** Banks incorporated in 21 (14) Member States lend more to domestic corporate clients than to corporate clients in other Member States (in all other countries). While this can be interpreted as home bias, this also means that, for banks incorporated in 10 Member States, the total credit exposure to corporate clients abroad is larger than the credit exposure to their corporate clients at home. Furthermore, for banks incorporated in 11 (13) Member States, the credit exposure to corporate clients in other Member States (in all other countries) is close to or even surpasses 10% of total credit exposures. Finally, for banks incorporated in some Member States, the credit exposure to corporate clients in third countries is significant, most notably the United Kingdom with credit exposures close to 17% and the Netherlands, Germany and Spain with exposures of around 10%.
- **Retail lending – large home bias.** The home bias is even stronger for retail clients, to which banks incorporated in all but one Member State lend more, often significantly more, domestically than to retail clients in other Member States (in all other countries). This notable exception are banks incorporated in Spain, which lend roughly the same amounts to retail clients at home (14%), in other Member States (15%) and in all third countries (11%). But credit exposures to retail clients in other Member States (in all other countries) can be significant: they are close to or surpass 10% for banks incorporated in five (five) Member States. Credit exposures to retail clients in the third countries surpass 10% for banks incorporated in only one Member State (Spain).

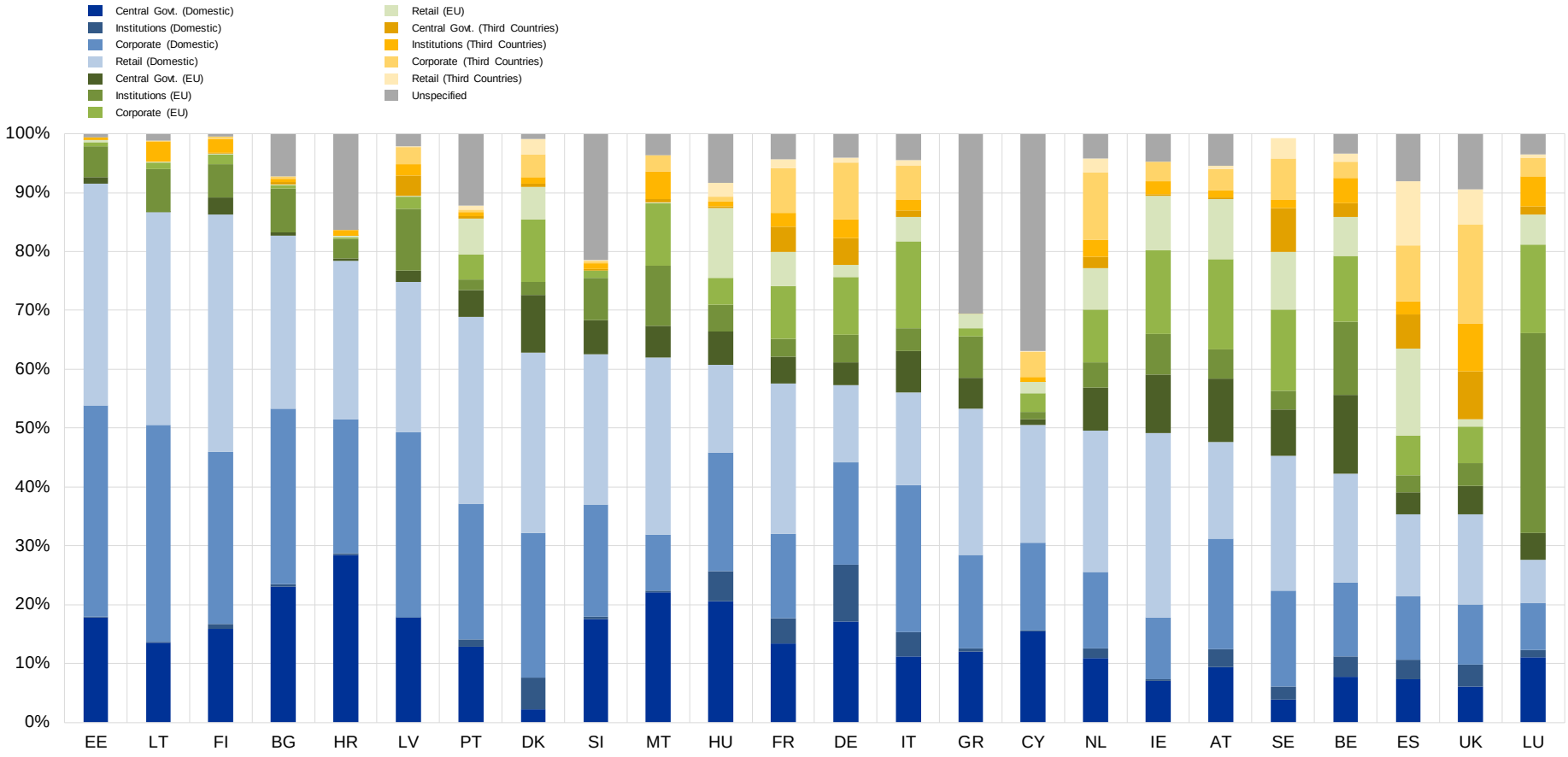
In sum, cross-border loans can be significant for the originating Member States, providing them with an incentive to reciprocate macroprudential measures that target the respective exposures (see below).

[59] "All other countries" refers to all other Member States plus third countries.

Figure 20

**Sectoral breakdown of credit exposures of domestically incorporated banks by Member State, Q2 2017**

*(percentages)*




Sources: EBA, ESRB calculations.
Notes: Based on a sample of about 200 large banks in the EU. Equity exposures were eliminated out from the data series as was the so-called "SA partial use", which is the result of differences in the mapping of sectors for exposures in the IRB and SA (standardised approach) reporting templates. The data are consolidated at the level of Member States, i.e. exposures by subsidiaries of EU parent banks are shown twice: (i) as domestic exposures in the Member State where the subsidiary is incorporated; and (ii) as cross-border EU exposures in the Member State where the parent bank is located. The figure provides the shares of bank exposures that are provided to: (i) the same Member State in which the bank resides ("domestic"); (ii) any other EU Member States ("EU"); (iii) countries outside the EU ("third countries"); and (iv) an unspecified residual, as a percentage of total exposures by domestically owned banks, subsidiaries of foreign parent banks in that Member State in the EBA sample. Exposures to other Member States are reported only by banks that have significant foreign exposures (more than 10% of total exposures). Exposures to third countries contain exposures to a list of 18 third countries and are reported only by banks that have significant foreign exposures (more than 10% of total exposures). The unspecified residual contains exposures to third countries that are not among the 18 listed third countries in case of banks with significant foreign exposures (higher than 10% of total exposures). The Czech Republic, Poland, Romania and Slovakia are omitted due to lack of data.

## 9.2 Amendments to the ESRB's reciprocity framework

**Given the importance of cross-border lending in the EU, reciprocity is important to ensure the effectiveness of national macroprudential policy.** Macroprudential measures taken by Member States generally apply only to domestic banks and subsidiaries of foreign banks but not usually to branches of foreign banks or to services that are provided directly across borders. As a result, the same risk exposure in a particular country may be subject to different (macro)prudential requirements. This regulatory loophole can be addressed through reciprocity, meaning that a Member State applies the same or an equivalent macroprudential measure that is set by another Member State to its own institutions. Reciprocity thereby extends the application of measures in one Member State to branches of foreign banks and banks providing services directly across borders. Reciprocity is important for exposure-based measures, i.e. measures that target exposures rather than specific institutions, thereby ensuring that risks are treated in the same way irrespective of which bank in which country holds the risk.

**As the EU legal framework relies mostly on voluntary reciprocity, the ESRB adopted a framework in December 2015 to promote the greater use of reciprocation.**[60] The ESRB framework foresees the reciprocation of exposure-based measures taken by Member States and covers both banking and non-banking measures within the EU. At the request of the Member State that activates a macroprudential measure, the ESRB recommends the measure for reciprocation to all other 27 Member States, if deemed justified. These Member States then reciprocate optimally with the same measure, or if this is not possible then with an equivalent measure. Member States have the option to exempt an individual financial service provider only if it has no material exposures to the Member State requesting reciprocation (so-called *de minimis* principle).

**In 2017, the ESRB amended its reciprocity framework to further harmonise the application of materiality thresholds under the *de minimis* principle.** The ESRB framework was amended by Recommendation ESRB/2017/4 with the aim of further harmonising the exemptions under the *de minimis* principle.[61] At the same time, the existing mandate of the ESRB in the area of reciprocity was broadened with the new task of validating the materiality threshold.

**Authorities of the reciprocating jurisdiction have discretion to apply the *de minimis* principle to financial service providers with non-material exposures** to the identified risk in the activating jurisdiction and waive the application of the reciprocated measure for them. The new framework foresees that the activating Member State proposes an institution-level maximum materiality threshold when requesting reciprocation of its measure.

**A materiality threshold of 1% of the institution's total risk exposure in the activating jurisdiction is considered appropriate as an initial orientation value.** Member States should make sure that all cross-border activities provided directly and via branches hosted in the activating jurisdiction are captured in the measurement. Situations in which the material exposure stems from many banks with small exposures might call for a calibration of the threshold below the orientation

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60 Recommendation ESRB/2015/2 on the assessment of cross-border effects of and voluntary reciprocity for macroprudential policy measures. For further details on the reciprocity framework, see Special Feature B: The ESRB's reciprocity framework – its first year of implementation in last year's edition of the *Review of Macroprudential Policy in the EU*.

61 Recommendation ESRB/2017/4 amending Recommendation ESRB/2015/2 on the assessment of cross-border effects of and voluntary reciprocity for macroprudential policy measures (OJ C 431 of 15.12.2017), see **https://www.esrb.europa.eu/pub/pdf/recommendations/2017/ESRB_2017_4.en.pdf**

value of 1%. Also, without prejudice to the country's full discretion to set and calibrate the threshold in a way that safeguards its own financial stability, lower thresholds might be chosen for banking sectors and markets systemically important for the EU or certain regions.

**The proposed materiality threshold is then validated by the ESRB.** Should it be deemed inadequate, a new threshold may be suggested, and introduced in the amendment of Recommendation ESRB/2015/2 supporting the reciprocation of the measure. The materiality threshold should be considered a maximum threshold, and the reciprocating authorities may always set a lower threshold or no threshold at all in order to acknowledge reciprocity as a matter of principle.

## 9.3 New measure recommended for reciprocation by the ESRB

### National flexibility measure in Finland

**The ESRB received an official reciprocation request concerning the Finnish national macroprudential measure in October 2017.** The measure consists of a credit institution-specific average risk weight floor of 15% for IRB banks, at the portfolio level, of residential mortgage loans secured by housing units in Finland (see Section 5). Several Member States have significant exposures to the Finnish RRE sector, most notably Sweden and Denmark (see Figure 26). As provided for by the ESRB reciprocity framework, under the *de minimis* principle, national authorities may exempt financial service providers with non-material exposure to the identified macroprudential risk in the activating country.[62] The Finnish authorities took account of the ESRB materiality guidance and proposed a materiality threshold of €1 billion.

**The ESRB reciprocity framework recommends that countries recognise and apply stricter national measures not only to branches but also to cross-border services provided in the activating country.** This goes beyond Article 458(5) of the CRR which does not explicitly list direct cross-border provision of services. However a broader scope should be considered, as it helps to reduce the risk of potential leakages and supervisory arbitrage in the cross-border context.

**The ESRB deemed the request adequate and issued a recommendation for reciprocation accordingly.** The ESRB considered the Finnish request and assessed the materiality threshold suggested by the activating country. In January 2018, the ESRB issued a recommendation on the recognition of the Finnish measure by other relevant jurisdictions of the EEA and its application to all credit institutions operating via branches or providing services directly in Finland with RRE exposures to Finland in excess of €1 billion.[63]

## 9.4 Reciprocating actions taken by Member States

### a) Systemic risk buffer in Estonia

**In 2016, the ESRB recommended reciprocating the Estonian SyRB.** The Estonian SyRB rate of 1% for domestic exposures of all credit institutions authorised in Estonia was introduced in 2016. The Estonian authorities requested the ESRB to recommend reciprocating the measure, motivated by a significant presence of foreign branches in Estonia (mainly from the Scandinavian and Nordic countries). An institution-specific materiality threshold of €200 million was suggested to guide the

[62] For reference, see the previous footnote.

[63] See **http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018Y0203(01)&from=EN**

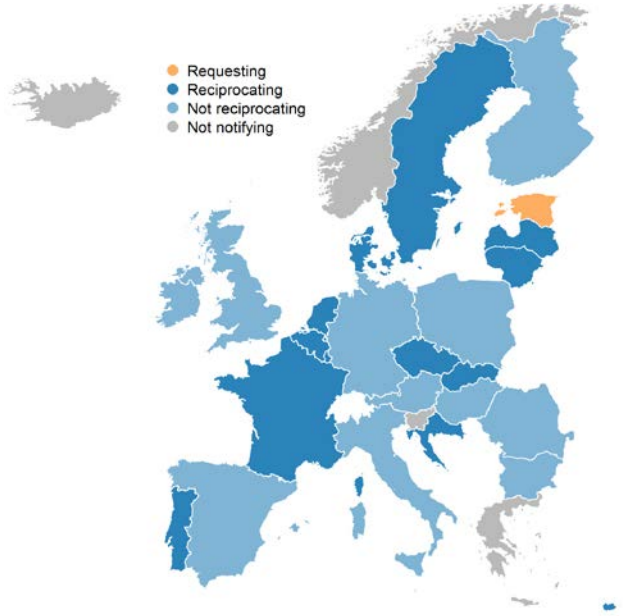
application of the *de minimis* principle. In June 2016 the ESRB issued its recommendation to other Member States to reciprocate the measure.

**Up to now, 14 Member States have reciprocated the Estonian SyRB rate of 1% (Figure 21).** These include Sweden and Denmark, the two Member States with the largest exposures to Estonia (see Figure 22). Over the course of 2017, the ESRB received two further notifications from reciprocating Member States, namely Croatia and Cyprus.[64] Together with Portugal, Luxembourg and Belgium, they decided to reciprocate the Estonian SyRB as a matter of principle, despite the fact that their exposures were insignificant. Finland is considering reciprocation now that its new legislation, allowing the SyRB, has entered into force (see Section 2.2).

[64] The Cypriot authorities reciprocated the SyRB rate for exposures in Estonia without any conditions or exemptions. In the Croatian case, locally incorporated institutions apply either the rate above 1%, if their EEA exposures are subject to the structural SyRB, or 1% – for Estonian exposures – if they are not subject to the EEA structural SyRB. The decision was complemented by the *de minimis* exemption for credit institutions whose risk-weighted credit risk exposures in Estonia do not exceed 2% of total risk-weighted credit risk exposure.

Figure 21

**Reciprocation of the Estonian systemic risk buffer rate by the other Member States**



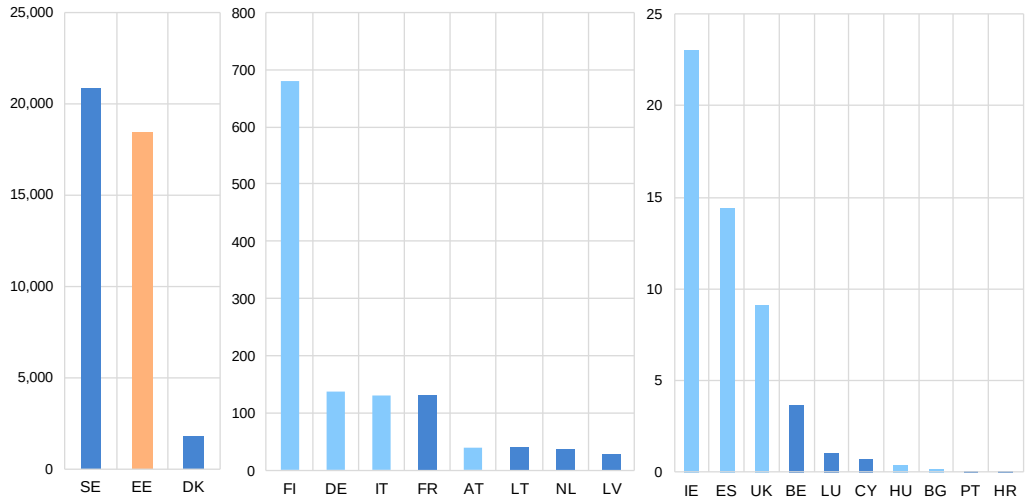

Source: ESRB.

Notes: "Requesting country" refers to the Member State that requested reciprocation for one of its measures. Here, this refers to Estonia, which requested reciprocation of its SyRB rate of 1%. "No reciprocation" means that the respective Member State decided not to reciprocate, i.e. did not put in place the necessary legal provisions. "Branches" and "Direct cross-border loans" indicate that exposures held by branches and loans extended directly across borders are covered by reciprocation, respectively. In the Czech Republic, the exposures to Estonia are covered by the SyRB that is in place in the Czech Republic and is levied on the five largest banks.

Figure 22

**Credit exposures to Estonia, Q3 2017**

*(euro millions)*




Sources: EBA, ESRB calculations.

Notes: Based on a sample of about 200 large banks in the EU. Data are consolidated at the Member State level. The above figure shows the original credit exposure to Estonia of banks in different Member States. Estonia as the Member State requesting reciprocation is shown in orange. Member States that have reciprocated the Estonian measure are shown in dark blue. Member States that have not reciprocated the Estonian measure are shown in light blue. No data for Greece, Poland and Romania. Portugal and Croatia reciprocated the measure. The figure cannot distinguish between exposures already covered by the Estonian measure itself because the exposure is taken by subsidiaries in Estonia and exposures that are to be covered only by reciprocation.

### b) National flexibility measure in Belgium

**In 2016, the ESRB had also recommended a Belgian national flexibility measure for reciprocation.** The stricter national macroprudential measure introduced in Belgium, under Article 458 of the CRR, consisted of a 5 pp risk weight add-on for IRB banks' exposures secured by residential immovable property in Belgium (see Section 5). The request for reciprocation and the ESRB recommendation for other Member States to reciprocate the measure was issued in March 2016.

**So far nine jurisdictions have reciprocated the Belgian measure** (see Figure 23). Among those are the three Member States with the largest exposures to the Belgian RRE sector, i.e. France, the Netherlands and Luxembourg (Figure 24). In 2017, the ESRB received two further notifications of reciprocating actions from Croatia and Cyprus. In line with the ESRB reciprocity framework countries reciprocated the Belgian measure in their jurisdictions.[65] Croatia reciprocated the measure and applied the *de minimis* principle. The measure concerns all banks whose risk-weighted exposure amount for the Belgian mortgage market exceeds 2% of their IRB portfolios. On the other hand, the Cypriot decision follows the "reciprocation in principle" approach and subjects all credit institutions domiciled in Cyprus to the new measure, without any exemptions, despite the fact that no credit institution uses an IRB approach at the moment.

**As the original, legally binding Belgian measure expired in May 2017 there is no legal basis anymore for reciprocating the measure.** The Belgian authorities have replaced the expired measure with a non-binding recommendation; they are also reassessing the situation and intend to take further RRE measures (see Section 5). The relevant authorities of the nine reciprocating jurisdictions have not been formally replicating the expired Belgian measure with a non-binding recommendation in their jurisdictions. The ESRB removed Belgium from its list of macroprudential measures to be reciprocated.[66]

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65 Recommendation of the European Systemic Risk Board of 15 December 2015 on the assessment of cross-border effects and voluntary reciprocity for macroprudential policy measures. According to sub-recommendation C(2) of this Recommendation, Member States should introduce the same macroprudential tool used in the activating jurisdiction or implement a similar measure with an equivalent economic effect

66 The removal was implemented by Recommendation ESRB/2018/1, which included the Finnish Article 458 CRR measure in the list of macroprudential measures to be reciprocated.

Figure 23

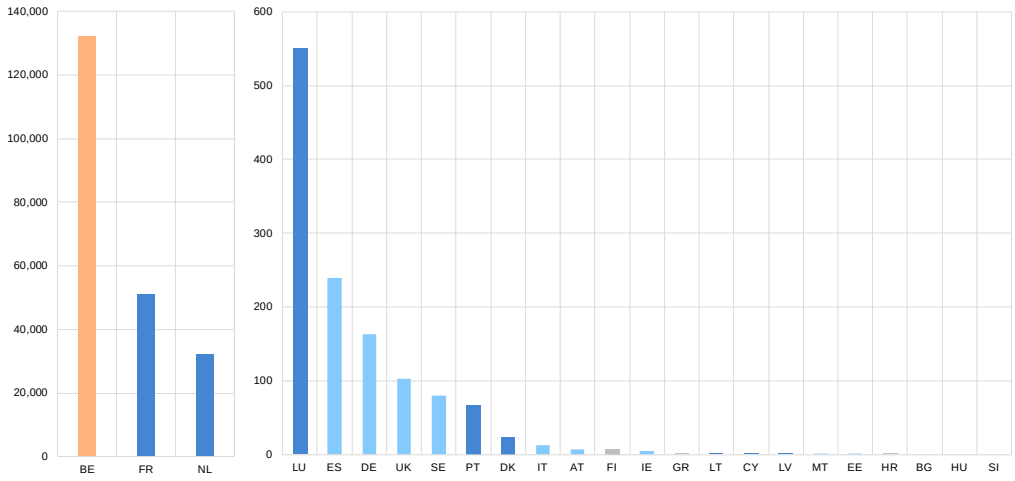
**Reciprocation of the Belgian national flexibility measure by the other Member States**


Source: ESRB.
Notes: "Requesting country" refers to the Member State that requested reciprocation for one of its measures. Here, this refers to Belgium, which requested reciprocation of its national flexibility measure (5-percentage-point risk weight add-on applied under Article 458(2)(d)(vi) of the CRR to Belgian mortgage loan exposures of credit institutions using the IRB approach). "No reciprocation" means that the respective Member State did not reciprocate, i.e. did not put in place the necessary legal provisions. "Branches" and "Direct cross-border loans" indicate that exposures held by branches and loans extended directly across borders are covered by reciprocation, respectively.

Figure 24

**Credit exposures to Belgian residential real estate, Q3 2017**

*(euro millions)*




Sources: EBA, ESRB calculations.
Notes: Based on a sample of about 200 large banks in the EU. Data are consolidated at the Member State level. The above figure shows the original credit exposure to Belgian residential real estate (excluding SMEs) of banks in different Member States. Belgium as the Member State requesting reciprocation is shown in orange. Member States that have reciprocated the Belgian measure are shown in dark blue. Member States that have not reciprocated the Belgian measure are shown in light blue. No data for Greece, Poland and Romania. Lithuania, Cyprus, Latvia and Croatia reciprocated. Malta, Estonia, Bulgaria and Hungary did not reciprocate; whilst Slovenia chose not to notify. The Belgian measure targets only IRB banks but the data used cannot distinguish between banks using the standardised and the IRB approach. Hence, the credit exposures shown in the figure potentially overstate the exposure subject to the Belgian measure and its reciprocation. Furthermore, the figure cannot distinguish between exposures already covered by the Belgian measure itself because the exposure is taken by subsidiaries in Belgium and exposures that are to be covered only by reciprocation.

### c) National flexibility measure in Finland

**By end December 2017 one jurisdiction had already reciprocated the Finnish national flexibility measure.** In October, the ESRB recommended the Finnish measure for reciprocation (see Section 9.3 and Figure 25). Sweden, the Member State with the largest exposures to Finnish real estate, reciprocated the measure in December 2017 (see Figure 26).

Figure 25

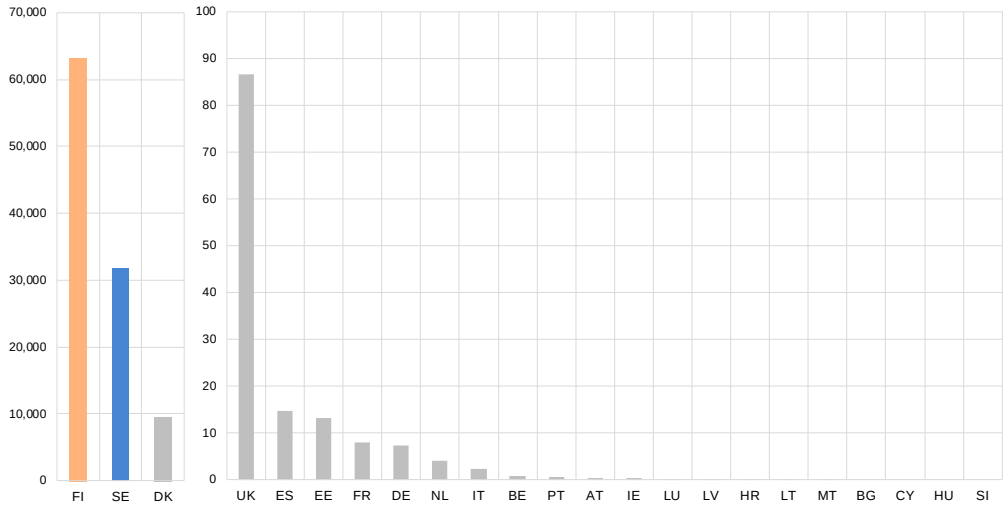
**Reciprocation of the Finnish national flexibility measure by the other Member States**


Source: ESRB.
Notes: "Requesting country" refers to the Member State that requested reciprocation for one of its measures. Here, this refers to Finland, which requested reciprocation of its national flexibility measure (a credit institution-specific average risk weight floor of 15% for IRB banks, at the portfolio level, of residential mortgage loans secured by housing units in Finland). "No reciprocation" means that the respective Member State decided not to reciprocate, i.e. did not put in place the necessary legal provisions. "Branches" and "Direct cross-border loans" indicate that exposures held by branches and loans extended directly across borders are covered by reciprocation, respectively.

Figure 26

**Credit exposures to Finnish residential real estate, Q3 2017**

*(euro millions)*



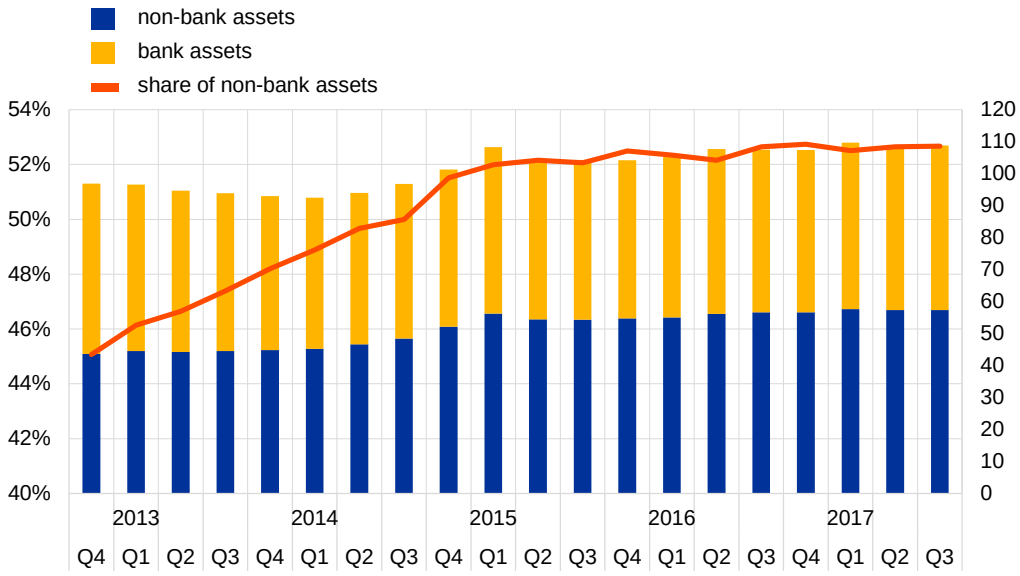

Source: EBA, ESRB calculations.
Notes: Based on a sample of about 200 large banks in the EU. Data are consolidated at the Member State level. The above figure shows the original credit exposure to Finnish RRE (excluding SMEs) of banks in different Member States. Finland as the country requesting reciprocation for its Article 458 CRR measure is shown in orange. No data for Greece, Poland and Romania. The Finnish measure targets only IRB banks but the data used cannot distinguish between banks using the standardised and the IRB approach. Hence, the credit exposures shown in the figure potentially overstate the exposure subject to the Finnish measure and its reciprocation. Furthermore, the figure cannot distinguish between exposures already covered by the Finnish measure itself, because the exposure is taken by subsidiaries in Finland and exposures that are to be covered only by reciprocation.

## 10. Macroprudential policy beyond banking

**As the non-bank financial sector grows, policymakers need to be able to identify risks to financial stability that might arise and develop tools to prevent or mitigate them.** Given the bank-based nature of the European economy, the state of the banking sector is central to the assessment of systemic risk. The financial system is, however, constantly evolving, with the non-bank financial sector playing an increasingly important role. In 2014 total financial assets of the EU non-bank sector for the first time exceeded those of the EU banking sector. For the third quarter of 2017 they amounted to €57.3 trillion compared to total financial assets of €51.5 trillion of the EU banking sector (see Figure 27). The path to growth set out in the European Commission's Action Plan on Building a Capital Markets Union means that this development is likely to continue.[67] This development would provide new sources of funding for business and increases options for investors and savers; yet existing risks may migrate and new risks may emerge. This makes it important to identify such risks and to develop tools to prevent or mitigate them.

Figure 27
**Bank and non-bank assets in the EU financial sector**

*(share, euro trillions)*




Sources: ECB, ESRB calculations.
Notes: Latest data Q2 2017. Based on financial accounts data on the total financial assets of the financial sector of the euro area plus non-euro area Member States. Bank assets are assets of monetary financial institutions excluding money market funds (MMFs). Non-bank assets are composed of assets held by money market funds (MMFs), non-MMF investment funds, insurance corporations, pension funds and other financial institutions.

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67 *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions – Action Plan on Building a Capital Markets Union*, European Commission, September 2015.

68 *EU Shadow Banking Monitor*, No 2, ESRB, May 2017. The methodology underlying the Monitor is described in Grillet-Aubert, L. et al, "Assessing shadow banking – non-bank financial intermediation in Europe", *Occasional Paper Series*, No 10, ESRB, July 2016.

## 10.1 Enhancing risk monitoring and identification capacity

**The development of a comprehensive risk monitoring framework for the non-bank financial sector is progressing.** The non-bank financial sector considered by the ESRB includes insurance corporations, pension funds, investment funds (including money market funds), other financial institutions and financial market infrastructures such as central counterparties (CCPs). To be able to identify risks to financial stability, a comprehensive risk monitoring framework for this part of the financial system is needed. While lack of granular data in some parts of the non-bank financial sector and for some activities continues to pose challenges, progress in building this risk monitoring framework has been made.

**As part of this monitoring framework, the ESRB published its second EU Shadow Banking Monitor.** The publication is a key element of the ESRB framework to monitor risks beyond the banking sector.[68] It presents metrics for monitoring such risks, identifies data gaps that need to be closed and informs discussions at the European level with a view to preventing or mitigating risks to financial stability. The second issue shows that the growth in broad EU shadow banking assets slowed markedly in 2016. In addition, the report highlights several risks and vulnerabilities that need to be monitored including: (i) liquidity risk and risks associated with leverage among some types of investment funds; (ii) interconnectedness and contagion risk across sectors and within the shadow banking system; (iii) procyclicality, leverage and liquidity risk created through the use of derivatives and securities financing transactions; (iv) vulnerabilities in some parts of the other financial institutions sector, where significant data gaps hamper risk assessment.

**The ESRB continued to explore trade repository data that has recently become available to monitor previously opaque derivatives markets.** The European Market Infrastructure Regulation (EMIR) provides the ESRB with access to a unique dataset from trade repositories. Building on the results from an initial investigation[69], the ESRB has published four case studies that focus on specific aspects of these markets.[70] These include a case study on derivatives compression (a post-trade technique increasingly used by market participants in order to reduce gross exposures) and a network analysis of the centrally cleared interest rate derivatives market that provides the first empirical analysis of client clearing using transaction-level data. In parallel, the ESRB is developing comprehensive data infrastructures and analytical methods with the aim of obtaining a timely and structured derivatives market monitoring framework.

**The ESRB published new indicators in its Risk Dashboard to monitor developments in CCPs and insurance companies.** With more financial transactions, including derivatives, being centrally cleared, CCPs have become key nodes of the post-crisis financial system. This makes the resilience of CCPs and how they interact with the wider financial system increasingly important for financial stability. To monitor developments in CCPs, the ESRB has developed a set of indicators based on data from the CPMI (Committee on Payments and Market Infrastructures) - IOSCO (International Organization of Securities Commissions) public quantitative disclosure framework.

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68 *EU Shadow Banking Monitor*, No 2, ESRB, May 2017. The methodology underlying the Monitor is described in Grillet-Aubert, L. et al, "Assessing shadow banking – non-bank financial intermediation in Europe", *Occasional Paper Series*, No 10, ESRB, July 2016.

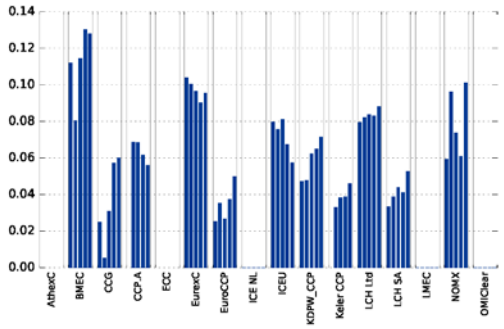
69 Abad, J. et al., "Shedding light on dark markets: first insights from the new EU-wide OTC derivatives dataset", *Occasional Paper Series*, No 11, ESRB, September 2016.

70 D'Errico and Roukny, "Compressing over-the-counter markets", *Working Paper Series*, No 44, ESRB, May 2017; Fiedor *et al.* "Networks of counterparties in the centrally cleared EU-wide interest rate derivatives market", *Working Paper Series*, No 54, ESRB, September 2017; Aldasoro and Barth, "Syndicated loans and CDS positioning", *Working Paper Series*, No 58, ESRB, November 2017.

The indicators consider concentration of clearing members, prefunded resources, CCP collateral, margin and haircut requirements and interoperability arrangements. Figure 28 shows CCP haircuts on non-cash initial margin which are a central part of the CCP risk management. This and other CCP indicators were published in the Risk Dashboard and are further described in an Occasional Paper.[71] With regard to insurance, the ESRB is gradually including indicators based on the new Solvency II regulatory regime in the Dashboard.

Figure 28
**Haircuts on non-cash initial margin**

*(x-axis: name of CCP which reported the data; y-axis: haircuts on non-cash initial margin)*




Source: ESRB calculations based on CCP publications according to the CPMI-IOSCO Public Quantitative Disclosure Framework.
Note: Lower haircuts could be due to a high amount of cash and government collateral.

**Progress to address risk to the financial system from beyond the banking sector has also been made.** When moving from identifying to addressing risks in the financial system, a number of elements need to work in tandem: good microprudential regulation and supervision make individual firms safer; recovery and resolution regimes provide legal certainty when a firm gets into trouble and they ensure that failure is orderly; and macroprudential policy looks beyond individual institutions and deploys tools to target systemic risks. The remainder of this section considers these elements in turn and describes developments over the review period.

## 10.2 Bringing macroprudential perspectives to microprudential regulation

**The ESRB has identified areas where the Solvency II framework for insurance companies could be enhanced.** Following the global financial crisis, substantial efforts were made to increase the resilience of individual firms, including beyond the banking sector. For example, Solvency II introduced a new regulatory regime for insurance companies with a view to improving policyholder protection and introducing a risk-based regulatory regime. The ESRB has analysed the macroprudential consequences of certain aspects of Solvency II, such as the regulatory yield curves which are important for determining the value of insurers' liabilities. The results of the ESRB's analysis were published in a report[72]. It concluded that a greater part of the Solvency II risk-free yield curves should be derived using market-based inputs, as this would increase the resilience of the insurance sector as a whole. It also noted that market valuation of insurers' balance sheets under Solvency II might result in procyclical investment behaviour. The report suggested that such procyclical effects should be monitored and that further work is needed on how these effects and/or their causes could be addressed.

[71] *Risk Dashboard, ESRB, Issue 23, 2018. The methodology underlying the indicators is described in Alfranseder et al. (2018) "Indicators for the monitoring of the central counterparties in the EU", Occasional Paper Series, No. 14,* ESRB, March 2018.

[72] *Regulatory risk-free yield curve properties and macroprudential consequences*, ESRB, August 2017.

**The ESRB also contributed to the review of EMIR.** EMIR is a milestone for making Europe's derivatives markets and the provision of central clearing services safer. The ESRB issued two reports in 2015[73] with proposals that it believes would further enhance the safety of derivatives markets in the EU. Building on these reports and further experience in the application of EMIR, the ESRB published a report on the revision of EMIR in order to further enhance the effectiveness and transparency of the current framework. In the report, the ESRB reiterates its previous support for a broad application of the clearing obligation to cover market participants that are active users of derivatives and makes proposals to improve trade reporting. It further includes suggestions to clarify the existing provisions to limit procyclicality of margin and haircut requirements and proposes including clients and indirect clients in these provisions.

## 10.3 Supporting the design of recovery and resolution frameworks

**The ESRB has identified areas where legislative proposals for a recovery and resolution framework for CCPs should be refined to better address macroprudential concerns.** As a key aspect of the post-crisis financial system, a recovery and resolution regime is particularly important for CCPs. Legislation in this area is progressing, and the ESRB issued an opinion[74] that highlights areas where legislative proposals should be refined to better address macroprudential concerns. The opinion includes proposals to improve resolution tools, e.g. allowing cash calls to be temporarily covered by initial margins to reduce the performance risk and procyclicality and to expand the list of resolution tools available to the resolution authority. It further notes that there is a need for cooperation and coordination between resolution authorities for banks and CCPs, as distress of a CCP would typically be triggered by distress in one or more banks that are CCP clearing members.

**The ESRB advocates the development of a harmonised recovery and resolution framework for the insurance sector across the EU.** In many instances, existing regulatory intervention measures and/or ordinary insolvency procedures may suffice when an insurance company gets into trouble. However, ordinary insolvency procedures may not always be consistent with policyholder protection and financial stability objectives. Reflecting this, the ESRB published a report that advocates the implementation of an effective recovery and resolution framework for the EU insurance sector.[75] The report argues that a harmonised approach towards recovery and resolution across the EU would help to manage in an orderly way the failure of a large cross-border insurer or the simultaneous failure of multiple insurers. Such a framework should include insurers and reinsurers and pursue both policyholder protection and financial stability objectives. The report also promotes the expansion of the existing recovery and resolution toolkit in order to increase the flexibility of supervisors dealing with failing (re-)insurers and considers the different ways (re-)insurers' resolution could be funded.

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73 Revision of the European Market Infrastructure Regulation, ESRB, April 2017.

74 *Opinion on a central counterparty recovery and resolution framework, ESRB, July 2017.*

75 *Recovery and resolution for the EU insurance sector: a macroprudential perspective*, ESRB, August 2017.

## 10.4 Developing macroprudential policy to target systemic risk

**The ESRB published a Recommendation to address systemic risks related to liquidity mismatches and the use of leverage in investment funds.** The Recommendation,[76] which took into account ongoing international and European initiatives on macroprudential policy in this area,[77] is addressed to the European Securities and Markets Authority (ESMA) and the European Commission. It focuses on five areas where the ESRB sees a need for guidance from ESMA to competent authorities on operationalising the macroprudential elements of the current regulatory framework and/or legislative changes. It advocates a proportionate framework for managing systemic risks that can arise in, or be propagated by, the investment funds sector, while at the same time maintaining the attractiveness of open-ended investment funds for investors and facilitating collective investment.

**The part of the Recommendation that focuses on risks from liquidity mismatches considers liquidity management tools, supervisory oversight and liquidity stress testing practices.** The ESRB recommends making a diverse set of liquidity management tools available to fund managers in order to increase their capacity to deal with redemption pressures under stressed market liquidity. Such tools could include redemption fees and the ability to temporarily suspend redemptions. In order to mitigate and prevent excessive liquidity mismatches, open-ended alternative investment funds (AIFs) that hold a large amount of less liquid assets should also be required to demonstrate to supervisors their capacity to maintain their investment strategy under stressed market conditions. In order to reduce liquidity risk and strengthen the ability of entities to manage liquidity in the best interests of investors, the ESRB also recommends that ESMA develop further guidance on how fund managers should undertake liquidity stress tests.

**The part of the Recommendation that focuses on leverage risks considers enhanced reporting and the operationalisation of existing leverage limits available to authorities.** The ESRB recommends the establishment of a harmonised reporting framework across the Union for Undertakings for Collective Investment in Transferable Securities (UCITS) such that authorities can better monitor and assess the contribution of UCITS to risks to financial stability. It also recommends that ESMA develop guidance on a framework to assess leverage risks and on the design, calibration and implementation of macroprudential leverage limits. Such guidance would facilitate the implementation of Article 25 of the AIF Managers Directive which provides an existing macroprudential tool to limit leverage in AIFs.

**The ESRB continued to contribute to the broader macroprudential toolkit through inputs into sector-wide stress tests.** The regulations of the European Supervisory Authorities mandate them to carry out stress tests in collaboration with the ESRB. As part of this collaboration, the ESRB in cooperation with the ECB designs scenarios of adverse developments based on the key risks identified by its General Board. Stressing firms in a sector based on common scenarios provides a macroprudential dimension to these stress tests. Over the review period, the ESRB

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[76] Recommendation of the ESRB on liquidity and leverage risks in investment funds (ESRB/2017/6), ESRB, February 2018, [**Link to published version**]

[77] On 12 January 2017, the FSB published a set of initial recommendations to address structural vulnerabilities from asset management activities arising from liquidity mismatches and the use of leverage in investment funds (Financial Stability Board (FSB) (2017), "Policy Recommendations to Address Structural Vulnerabilities from Asset Management Activities", January). To complement the FSB's work, IOSCO has been tasked with operationalising the FSB's recommendations. In February 2018, IOSCO issued its recommendations and good practices to improve liquidity risk management for investment funds. Further work on leverage is due to follow.

transmitted adverse scenarios to the insurance stress test of EIOPA and to the CCP stress tests of ESMA.

# Special feature A: Bank branches and macroprudential policymaking in the EU[78]

**This special feature analyses the growing role of bank branches for financial stability and macroprudential policymaking.** In particular, it maps the recent dynamics and distribution of branches in the EU, provides an overview of the treatment of branches in the EU legislation from the financial stability perspective, and concludes with a discussion of macroprudential policy options in the context of a growing importance of branches as a form of cross-border banking.

## A.1 Introduction

**The provision of cross-border banking services via branches is an important and dynamic part of the financial system in a number of Member States.** In several countries, there has been an observed decline in the number and share of subsidiaries since the financial crisis which has been accompanied by an increased role for branches (see Figure A.1). In many cases, significant increases in the share of branches have been directly linked to the transformation of subsidiaries into branches (so-called branchification) rather than to the organic growth of branches. One notable example of such transformation is the recent decision by Nordea to convert its Finnish, Danish and Norwegian subsidiaries, which were identified as other systemically important institutions (O-SIIs) in their host countries, into branches in early 2017.[79,80]

**The evolving position of branches could have important implications for macroprudential policy.** Branches are not legal entities in their own right and are, from a legal point of view, part of the parent undertaking. As such, they are supervised by the competent authority of the home Member State and their regulatory treatment may differ from that of subsidiaries. The prudential supervision of subsidiaries, on the other hand, is the responsibility of the competent authority of the host Member State. This sharing of responsibilities in prudential supervision of cross-border entities applies in part also to macroprudential policymaking. In particular, some macroprudential measures adopted by authorities of the host Member State may be directly applicable only to financial institutions authorised in that Member State. In order to be fully effective, however, macroprudential policy needs to apply to all relevant institutions (directly or via reciprocity measures) so that the risk of regulatory arbitrage and leakages is reduced.

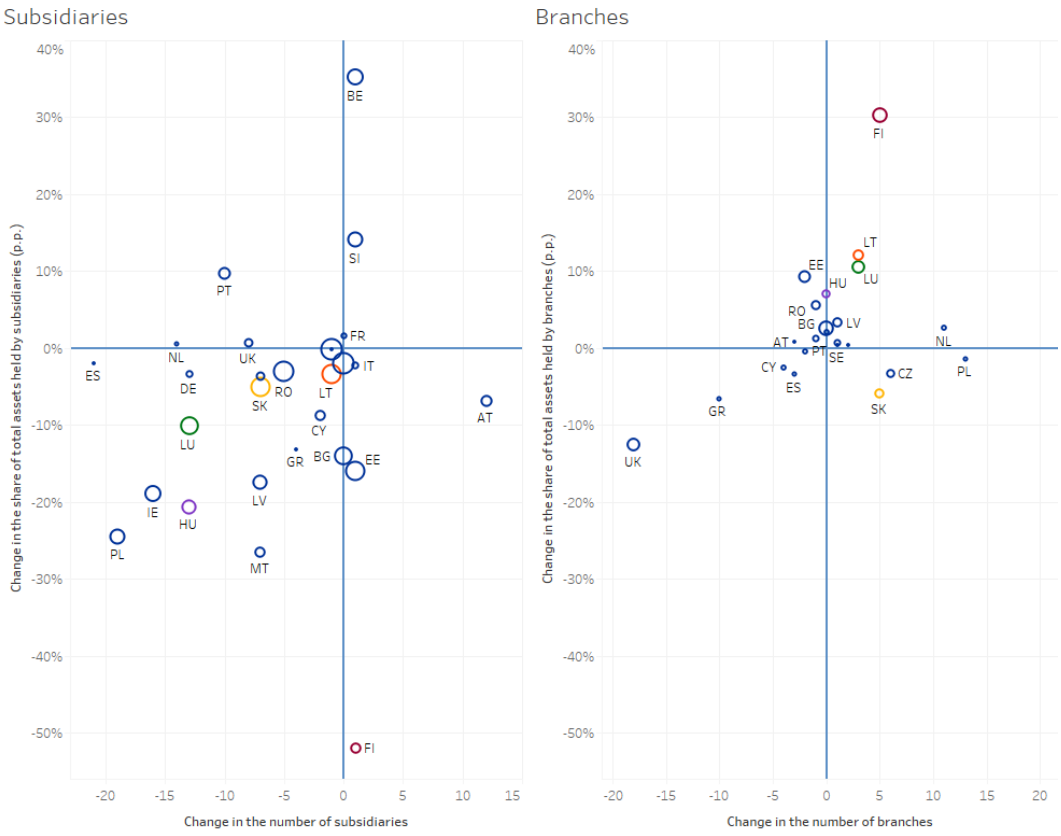
78 Prepared by Tomáš Konečný and Ľuboš Šesták with research assistance from Pedram Moezzi (all ESRB Secretariat).

79 See **http://www.nordea.com/en/about-nordea/corporate-governance/legal-structure/**

80 Only a few countries experienced a rise in the number (Austria, Estonia, Finland, Italy) or share (Belgium, Slovenia, Portugal, France) of subsidiaries. A significant increase in the share of subsidiaries can be linked to cross-border mergers and acquisitions.

Figure A.1

**Changes in the share of foreign branches and subsidiaries across the EU (in pp, 2007-17)**




Sources: ECB Consolidated Banking Data and Banking Structural Statistical Indicators, ESRB Survey and ESRB Calculations.
Notes: The size of the data point represents the share of assets of branches/subsidiaries in total assets at Q2 2017. The change in the share refers to a percentage point change in the share of branches/subsidiaries between Q4 2007 and Q2 2017. The changes in the number of institutions are between 2007 and 2016. However, the period of study is altered for a Member State if it is without sufficient data. In such cases, the period of study is held constant for both the branch and subsidiary graphs for an individual Member State. Specifically these cases with limited information on institution numbers are, Austria (2008 to 2016), Bulgaria (2007 to 2014), Croatia (2013 to 2016), Cyprus (2008 to 2016), Denmark (2008 to 2014), Estonia (2008 to 2016), Germany (2008 to 2016), Finland (2011 to 2016), Greece (2008 to 2016), Hungary (2008 to 2016), Ireland (2008 to 2016), Latvia (2008 to 2016), Luxembourg (2008 to 2016), the Netherlands (2008 to 2016), Romania (2008 to 2016), Slovakia (2007 to 2016), Slovenia (2012 to 2016), Spain (2008 to 2016) and Sweden (2010 to 2014). The periods of study are also altered in the presence of limited banking asset information, such cases are Austria (Q4 2008 to Q2 2017), Bulgaria (Q4 2007 to Q2 2014), Croatia (Q2 2013 to Q2 2017), Cyprus (Q4 2008 to Q2 2017), Denmark (Q4 2008 to Q2 2014), Estonia (Q4 2008 to Q2 2017), Germany (Q4 2008 to Q2 2017), Finland (Q4 2011 to Q2 2017), Greece (Q4 2008 to Q2 2017), Hungary (Q4 2008 to Q2 2017), Ireland (Q4 2008 to Q2 2017), Latvia (Q4 2008 to Q2 2017), Luxembourg (Q4 2008 to Q2 2017), the Netherlands (Q4 2008 to Q2 2017), Romania (Q4 2008 to Q2 2017), Slovakia (Q4 2007 to Q2 2016), Slovenia (Q4 2012 to Q2 2017), Spain (Q4 2008 to Q2 2017) and Sweden (Q2 2010 to Q4 2014). For Austria, Latvia and Romania, information is missing for non-EU branch numbers in 2008. For Estonia (Q4 2008) and Slovakia (Q4 2007), data is missing for non-EU branch assets. For Belgium (2007), Finland (2011) and Greece (2008), information on the number of non-EU subsidiaries is missing. For Belgium (Q4 2007), Estonia (Q4 2008), Finland (Q4 2011), Greece (Q4 2008) and Slovakia (Q2 2016), information is missing for non-EU subsidiary assets. Information on both EU and non-EU branch assets for Belgium, Denmark, France, Ireland and Italy is not available. For the United Kingdom, CBD and Banking SSI data are used to evaluate changes from 2008 to 2016, for both asset shares and institution numbers.

## A.2 Cross-border penetration and branches across the EU

**The degree of cross-border financial penetration varies significantly across Member States.** Foreign institutions[81] have a majority of banking assets in 16 Member States and the share of

[81] The term "foreign institutions" refers to subsidiaries or branches with the full or majority ownership/control by a financial institution headquartered outside the country where the subsidiary/branch is located.

branches has been rather limited so far (see Figure A.2). The share of foreign subsidiaries is nonetheless quite significant in particular in central and eastern European (CEE) countries, Baltic countries and smaller economies. The market share of foreign affiliates (i.e. branches and subsidiaries combined) exceeds 75% in seven CEE countries and Luxembourg. The market share of branches in these countries is between 0% and 25%. The share of foreign affiliates is also substantial in another eight countries, ranging between 40% and 60%, where in Finland and Malta the share of branches exceeds 40% of total banking assets.[82] On the other side of the spectrum, there are seven countries where financial penetration is currently low and the share of foreign affiliates is below 10%. The share of non-EU branches and subsidiaries is generally significantly lower than the shares of EU branches and subsidiaries, with the exception of Malta, Ireland and the United Kingdom.

**Member States with highly overbanked markets[83] generally have a low degree of cross-border penetration.** Overbanking combined with a very low degree of cross-border financial penetration in large EU economies point to persisting market fragmentation and obstacles to banking sector consolidation at the EU level. At the same time, despite the already high foreign presence in a number of countries in the CEE and Baltic region, markets in these economies are still relatively less developed compared to their EU peers. Going forward, economic growth and progress in the integration of the European market in banking services might contribute to a more balanced picture of the European banking sector.

**A low degree of cross-border penetration across a number of large EU economies may weaken their ability to appropriately address asymmetric macroeconomic shocks.** Macroeconomic shocks may propagate in the single market (and even more so in a monetary union) and spread across borders without national authorities being able to address them in an adequate manner. The use of the exchange rate in addressing such shocks may, in practice, not always be possible, even outside the euro area. Furthermore, the usual redistributive (fiscal) policy tools may not be available to a sufficient extent to be really effective. To counteract such episodes of shocks, national adjustment can be facilitated if the banking sector can benefit from funding, lending and investment across the single market. The lack of a sufficient number of large EU-wide players is likely to have contributed to the severity of the recent euro crisis as asymmetric shocks simultaneously affected the same national sovereigns, economies and banks.

**The heterogeneity in the number and total assets of foreign branches across the EU host countries is substantial.** In particular the Nordic and Baltic countries can be regarded as a "laboratory" for large branches. First, in a number of these countries some branches are major, if not dominant, players in the retail market (e.g. the Nordea branches in the Nordic and Baltic countries before the creation of the Luminor bank in October 2017). Second, the relatively large size of the banking sector in the region serviced by branches is further highlighted by the high number of branches with market shares in top quintiles of EU figures.[84] There are similar cases in the rest of the EU both in terms of the overall market share and its composition, although with some important differences. Some other countries have a large overall share of branches in their banking sectors (e.g. Belgium, Slovakia and Romania, all exceeding 10%). Ireland and Luxembourg are

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82 After the planned move of Nordea's headquarters from Sweden to Finland, the situation in Sweden and Finland will change.

83 ESRB (2014), "Is Europe overbanked?" *Reports of the Advisory Scientific Committee*, No 4, June. The assessment of overbanking includes the size, recent growth, concentration and leverage of the European banking system in comparison to other banking systems.

84 According to an ESRB survey, 8 out of 12 branches with a market share of more than 5% in the local market were located in the Nordic / the Baltic countries.

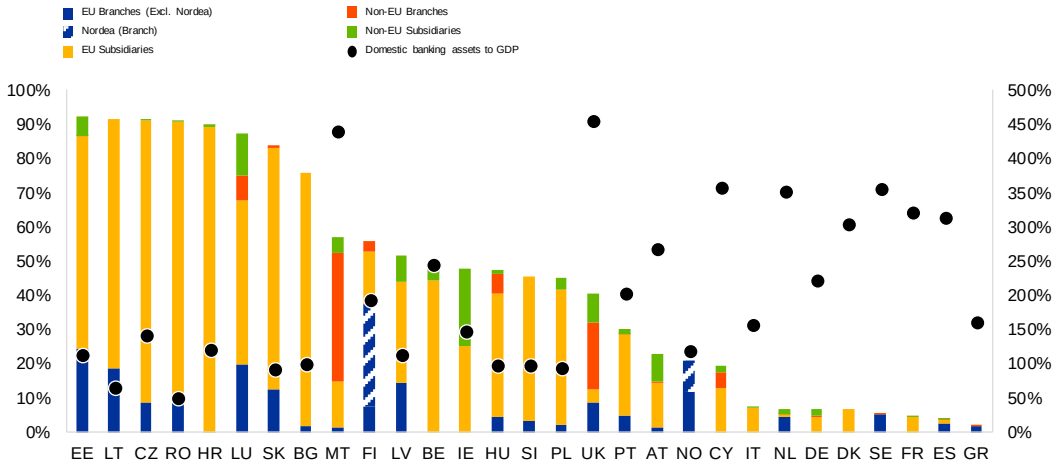
similar to the northern European region in terms of a relatively skewed distribution of market shares of individual branches. Nonetheless, branches in these two latter countries have a rather specific profile, the key distinction being that the primary focus of most branches is on investment banking-type activities as opposed to retail banking activities.

**Designated O-SII subsidiaries of foreign parent institutions play a significant role in the banking sectors of a number of host countries.** O-SIIs are institutions that can pose risks to financial stability and contribute to market distortions due to their size, complexity or provision of critical services. In eight Member States, foreign institutions designated as O-SIIs hold more than 50% of total banking sector assets.[85] In Croatia, the share reaches almost 90%. All foreign O-SIIs are subsidiaries of EU-based institutions. The designated O-SII subsidiaries of foreign parent institutions are natural candidates for possible cases of branchification relevant from a financial stability perspective.

Figure A.2

**Heterogeneity across the EU – share of foreign affiliates in total banking sector assets and banking assets relative to GDP across the EU in 2017**

*(percentages)*




Sources: ECB Consolidated Banking Data, Banking Structural Statistical Indicators and Derived Data, ESRB Survey and ESRB calculations.
Notes: The coloured stacked bars refer to the share of assets held by branches and subsidiaries in the total banking assets of a Member State, as of Q2 2017, and correspond to the left axis. The black triangles refer to the total domestic banking assets-to-GDP ratio, taking the nominal country GDP for 2016, corresponding to the right axis. The right-hand axis is truncated at 500%; as such, the true value for Luxembourg is 1,558%. For the United Kingdom, partial data result in the use of two databases (Consolidated Banking Data and Banking Structural Statistical Indicators). All data for the United Kingdom are as of Q4 2016. Due to missing (CBD) data for Denmark, statistics here are consolidated with the ESRB Survey statistics, as submitted by the Danish authorities. Norway's shares are derived from the ESRB Survey solely, which covers just the EU branches and Nordea's share within this. Additionally, the total national banking assets-to-GDP ratio for Norway was provided directly by the Norwegian authorities.

**According to a survey conducted by the ESRB's Instruments Working Group in mid-2017,[86] the majority of conversions of subsidiaries into branches related to instances of a relatively minor importance to the banking system of the host countries.** At the time of the survey, there were 13 EU branches and 3 non-EU branches with an asset market share greater than 5% in the local market and a further 44 EU-branches and 9 non-EU branches with a market share above 1%. Members also reported 43 cases of branchification between 2005 and 2017, of which 37 were after

[85] The calculations used consolidated data for all foreign subsidiaries designated as an O-SII obtained from the SNL database and sums of consolidated banking assets for each EU country and Norway regardless of the origin of the parent company.

[86] The survey focused on the conversion of subsidiaries into branches. However, it also aimed to map the distribution of major branches across the EU and to identify potential financial stability implications.

the financial crisis. According to the survey, business optimisation has been the main driver for branchification; cost savings, a more efficient structure, regulatory burden, prudential requirements, market exit strategy and regulatory arbitrage were in some cases mentioned as additional reasons.

**Some conversions, however, raised questions about their potential impact on financial stability.** These include Nordea's conversion of its three Finnish, Danish and Norwegian O-SII subsidiaries into branches in early 2017.[87,88] A unique feature of the Nordea example is the size of the subsidiaries being converted into branches. At the time of conversion, the subsidiaries in Finland, Denmark and Norway represented about 40%, 10% and 9% of total banking sector assets in the three countries, respectively. The transformation of the Finnish subsidiary furthermore involved the creation of a new subsidiary called Nordea Mortgage Bank which retained the mortgage lending part of former Nordea Bank Finland. Nordea's Board of Directors decided on 6 September 2017 to initiate the relocation process of the bank's headquarters to Finland.[89]

**The survey listed another case where an identified O-SII subsidiary was converted into a branch; however another three significant branches were converted before the introduction of the O-SII framework.** The case of the identified O-SII was the conversion by the French bank CASCEIS of its Luxembourg subsidiary as of end 2016. The other cases include Lithuanian AB SAMPO bank converted into the Danske Bank A/S Lithuania branch in mid-2008, an Estonian branch of Danske bank and Slovak Unicredit bank in 2013. In other cases, branchifications were of minor importance for the banking sectors of the Member States concerned.

**The forthcoming cases of major branchifications are likewise concentrated in the Nordic/Baltic countries.** Following a pattern similar to Nordea in Finland, Danske Bank merged its Finnish banking activities into Danske Bank A/S, Helsinki branch in December 2017. Danske Bank Finland plc (DBK) transformed into a branch and a separate covered bond bank was established as required by Finnish law to issue covered bonds. Mortgage loans that are used as collateral were carved out from the balance sheet of DBK and transferred to the balance sheet of the new Finnish subsidiary. Furthermore, a new stand-alone bank (Luminor) with a share of 23% of the Baltic lending market was created in October 2017 following the merger of the operations of the Nordea branch and the DNB subsidiaries in the Baltic countries. While the bank has initially retained its independent governance and has an arm's length relationship with its two parent banks, Nordea and DNB, branchification of the newly created joint entity is planned to commence in 2019-20 with the home authority of the Luminor bank being based in Estonia.[90] Although these cases are concentrated in the Nordic/Baltic countries, the completion of the banking union could foster further financial integration within the euro area, thus leading to an increased trend of branchification.

## A.3 Prudential treatment of branches in the EU

### a) Microprudential perspective

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87 **http://www.nordea.com/en/about-nordea/corporate-governance/legal-structure/**

88 In another three cases (Estonia, Greece, Slovakia), branchification with a likely O-SII dimension occurred before the O-SII framework was introduced.

89 See Nordea's press release of 6 September 2017 available at **https://www.nordea.com/en/press-and-news/news-and-press-releases/press-releases/2017/09-06-16h50-the-nordea-bank-ab-publ-board-of-directors-initiates-a-re-domiciliation-of-the-parent-company-to-finland.html**. The change is subject to the necessary regulatory approvals and the shareholders' approval at a general meeting, among other things.

90 For more details see **https://www.luminor.ee/en/news/new-financial-services-provider-baltics**

**Credit institutions can in principle conduct foreign operations through three main channels: (i) by establishing a subsidiary; (ii) by establishing a branch; and (iii) by providing direct cross-border services.** A subsidiary, as a stand-alone credit institution (i.e. a separate legal entity) established in a foreign market, is subject to solo prudential regulation requirements in the foreign market. A foreign branch is not a separate legal entity; it generally requires a licence from the foreign authorities and is subject to at least some prudential regulation in the foreign market. Finally, the possibility to provide direct services across borders without establishing any formal presence in the foreign market is subject to different international or bilateral agreements.

**The EU regulatory framework for banks (CRD IV and CRR)[91] provides a simple and unified set of prudential rules for conducting cross-border activities in the EU (principles of the single market and the single rulebook).** The level of integration deriving from the Treaty's freedom of establishment and free flow of services is enhanced by the harmonised prudential framework that introduces the single EU passport. Under this regime, home country licensing decisions are mutually recognised by all other host supervisors in the EU/EEA. As a result, any bank with an EU/EEA banking licence is allowed to provide cross-border financial services across the EU (subject to notification of the home authority), either by establishing a branch in a host jurisdiction or by directly providing cross-border services without establishing a formal presence.

**The supervision of the branch is carried out by the competent authority of the parent institution (home authority).[92]** Nonetheless, under special circumstances host authorities might take precautionary measures in order to safeguard financial stability of the host Member State. The supervision of cross-border operations of banks is, however, facilitated by the establishment of close collaboration and exchange of information with host supervisors, which also contributes to protecting financial stability in the host jurisdictions. Contrary to the supervision of subsidiaries, the host authority does not have access to regular supervisory reporting which is collected by the home authority. In this respect, a functional exchange of information becomes critical for the effective supervision in the host Member State.

**For branches with a significant role[93] within the financial system of the host country, the single rulebook introduces enhanced provisions for host authorities**. These provisions primarily concern easier access to information on the branch and the group from the home authority and the right of the host country's competent authority to participate in the college of supervisors that is a platform for the coordination of supervisory activities. Host authorities are also consulted on the recovery and resolution plans of the group with a significant branch in their jurisdiction; home resolution authorities should give due consideration to the interests of each Member State where

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91 Directive 2013/36/EU of the European Parliament and of the Council on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms (CRD IV) and 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 (CRR).

92 Under special circumstances host authorities might take precautionary measures in order to safeguard the financial stability of the host Member State. In particular, in an emergency situation and pending the home authority's measures, the host competent authority can take proportional precautionary actions to protect against financial instability that would seriously threaten the collective interests of depositors, investors and clients in the host Member State (Article 43 of the CRD). It can also take appropriate measures to close down cross-border operations or restrict the services provided by a credit institution if they are against the interests of the general good of the host jurisdiction (Article 44 of the CRD).

93 Host competent authorities can designate branches as significant (Article 51 of the CRD) with particular regard to the following: (i) the branch's market share in deposits exceeds 2%; (ii) the closure or suspension of the branch's operations is likely to have an impact on systemic liquidity, payments, clearing and settlement systems; and (iii) the size and importance of the branch within the host financial system.

significant branches are located, especially regarding the financial stability of those Member States.[94]

**The EBA Guidelines on supervision of significant branches[95] provide further strengthening of a framework for the supervision of significant branches.** By establishing the concept of so-called significant-plus branches, the guidelines aim to improve on the outcome of the supervision and recovery planning of the institutions concerned, without interfering with the existing legislation. For branches to be significant-plus, they should qualify as significant under Art 51 of the CRD, perform critical functions and be assessed either as important for the group or as important for the financial stability of the host Member State. The enhanced framework envisages intensified supervision, cooperation and coordination between the competent authorities. Furthermore, it is considered that significant-plus branches should be reflected in the risk assessment of the supervised institution, with an enhanced role for significant-plus branches within resolution planning. While the Guidelines operate fully within the microprudential supervisory framework, they also consider coordination of macroprudential measures relevant to the significant-plus branch.

**Furthermore, the banking union provides additional harmonisation through the Single Supervisory Mechanism (SSM) and the Single Resolution Mechanism (SRM).** Exclusive competencies granted to the ECB by the SSM Regulation[96] include: (i) authorisation of credit institutions and withdrawal of the banking licence; (ii) tasks of the home authority with regard to establishing branches or the provision of cross-border services outside the banking union; (iii) assessing the acquisition of qualifying holdings in credit institutions; (iv) supervision of significant institutions within the SSM; (v) tasks of the host authority with regard to establishing branches or provision of cross-border services from institutions outside of the banking union; and (top-up) national macroprudential measures if deemed insufficient. The distinction between home and host authorities has diminished within the banking union and the colleges of supervisors have been replaced by Joint Supervisory Teams.[97] The SRM provides for a single resolution framework within the banking union by means of the Single Resolution Board.

### b) Macroprudential perspective

**The macroprudential policy framework should be able to mitigate systemic risks regardless of the structure of the financial sector.** The key task of macroprudential policy is to prevent and mitigate cyclical and structural systemic risks either by limiting the build-up of risks or by increasing the resilience of the financial sector. The structure of the financial sector might influence the transmission mechanisms as well as the appropriateness and efficiency of available macroprudential policy tools. A growing role of branches might thus alter the way the financial system responds to local and external shocks and provides key functions to the host economy in

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94 Article 87 of 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 (BRRD).

95 The Guidelines will apply from 1 January 2018.

96 Council Regulation (EU) No 1024/2013 of 15 October 2013 conferring specific tasks on the European Central Bank concerning policies relating to the prudential supervision of credit institutions.

97 ECB Regulation (EU) No 468/2014 of 16 April 2014 establishing the framework for cooperation within the Single Supervisory Mechanism between the European Central Bank and national competent authorities and with national designated authorities.

times of stress and across the financial cycle. This dynamic might also call for the adjustment of the macroprudential policy mix to address the ensuing shift of systemic risks.[98]

**However, the macroprudential policy options of the host authority might be limited as branches (unlike subsidiaries) do not need to hold own capital.** Capital cannot be allocated in the host Member State, be it through an O-SII buffer or any other type of capital buffer. Macroprudential capital buffers linked to exposures of a branch may be imposed at the consolidated level. In the case of the CCyB or systemic risk buffer, the application relies on mandatory and voluntary reciprocity mechanisms following Articles 136, 137 and 134 of the CRD respectively. In the case of an O-SII buffer, however, the systemic aspect of cross-border activities in individual host countries is reflected only indirectly as a part of the overall cross-border activities of the parent undertaking.

**The macroprudential policy of the host country therefore needs to rely more on reciprocity to address systemic risks.** The CRR prescribes mandatory reciprocation in the application of risk weights and criteria (Article 124(5)) and the higher minimum LGD values (Article 164(7)) to exposures secured by (commercial and residential) property. Mandatory reciprocation is also applied to the CCyB up to the level of 2.5%. Furthermore, voluntary reciprocation is foreseen for the CCyB in excess of 2.5%, national macroprudential measures introduced under Article 458 of the CRR and the systemic risk buffer[99].

**However, for any other measures, either regulated by Union law (Pillar 2, O-SII buffers) or non-harmonised measures (such as LTV and DTI), reciprocity arrangements are either not applicable or some of the tools may not even be available in the reciprocating countries.** Reciprocation of such measures is subject to the availability and willingness to use these instruments in the home country. Even if measures also apply to branches,[100] the supervision of compliance is conducted by the home competent authorities or the SSM. Therefore, strong policy coordination is necessary to ensure that national macroprudential policy remains effective and does not create negative spillovers to other jurisdictions. Given its mandate, the ESRB actively assesses national macroprudential measures, analyses potential cross-border effects, and recommends reciprocity to mitigate risk of circumvention. Since its inception, the ESRB has advocated that the scope for reciprocity be enhanced and mandatory reciprocity be further developed and extended, especially regarding exposure-based measures[101].

**Macroprudential authorities need to have access to information which is relevant to perform their tasks.** Reporting obligations of branches are lower than for subsidiaries. If a significant part of the national market is operated by branches, this could limit the ability of the macroprudential authority to identify and assess systemic risks. For significant branches, additional data could be collected through supervisory cooperation. However, the data should not be shared only with the

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98 Branchification might also raise potential financial stability risks associated with the shift in responsibilities in the coverage by deposit guarantee schemes (DGS). The fact that deposits in branches are protected by the DGS of the home country (instead of the host country) may prove problematic in case of adverse financial developments in the home country since depositors in the host country might worry about the access to, and the adequacy of, the DGS. These concerns have in principle been addressed by Directive 2014/49/EU on DGS, yet it remains to be seen how the legislation would work in practice.

99 As reciprocation of the CCyB in excess of 2.5% is subject to recommendation ESRB/2014/1 and not subject to recommendation ESRB/2015/2, voluntary reciprocity is recommended without any reference to a potential *de minimis* principle and related materiality threshold.

100 For example, if borrower-based measures are introduced through a product regulation, branches providing services in the host country are bound by these measures as well.

101 See Section 9.

competent authority, but with the macroprudential authority as well. Moreover, the macroprudential authority might need different data than the competent authority given their different mandates and such data needs might differ from one Member State to another based on the systemic risks each faces.

**The sound treatment of branches in the area of resolution represents another policy area with a financial stability dimension.** The EU resolution framework might include coordination with macroprudential authorities regarding systemically important institutions. The EU resolution framework was introduced in 2014 by the Bank Recovery and Resolution Directive (BRRD)[102] in order to ensure smooth resolution of failing entities including SIIs. The framework includes high-level safeguards such that the home resolution authority should duly take into account the impact of the bank on countries where it has significant branches. However, for the time being, the macroprudential authority is not involved in this assessment, nor does it have the right to designate significant branches. It is important that the optimal resolution strategy reflects the systemic risk posed by individual parts of the group.

**Finally, a stronger cooperation framework between home and host competent, macroprudential and resolution authorities is warranted to ensure financial stability.** The planned relocation of Nordea headquarters from Sweden to Finland following the group's branchification in early 2017 points to the need for close cooperation between all authorities to avoid regulatory arbitrage and to mitigate systemic risk. First, cooperation needs to ensure that macroprudential authorities have access to all relevant data for identification and assessment of systemic risks. Second, macroprudential authorities should also be mandated to designate (either solely or together with microprudential supervisors) significant branches and be involved in the development of their resolution plans. Third, cooperation should ensure that systemic risks are sufficiently covered by the reciprocation of the macroprudential measures taken by the host authority.

**The Memorandum of Understanding on supervision of significant branches in the Nordic region provides an example of the development of a coordination framework intended to facilitate cooperation between competent authorities in the region.** Given the presence of a number of significant branches of several large Nordic banking groups in Denmark, Finland, Norway and Sweden, Finanstilsynet (Denmark), Finanssivalvonta (Finland), Finanstilsynet (Norway), Finansinspektionen (Sweden) and the European Central Bank signed the Memorandum of Understanding in December 2016 with the objective of intensifying the collaboration between the supervisors of the host and home Member States.[103] In June 2017, this Memorandum was also accessed by the competent authorities of Estonia, Iceland, Latvia, and Lithuania.

**The Memorandum contains elements designed to facilitate the supervision of cross-border groups with significant branches, including from the macroprudential perspective.** For example, by acknowledging the general principle of full reciprocity, the agreement reaches beyond the reciprocity benchmark as laid out in ESRB Recommendation ESRB/2015/2. The Memorandum also explicitly addresses large branches which, if they were subsidiaries, would be considered by the competent authority of the host Member State to be systemically important credit institutions. In particular, large branches are subject to the highest level of cooperation, extensive information

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[102] 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.

[103] For details see **https://www.finanstilsynet.dk/~/media/Om-os/2016/mou-filialer-nordiske-lande-2016-12-19n.pdf?la=da**.

sharing, liquidity arrangements, information exchange with respect to internal models with material impact on large branch exposures, as well as recovery planning.

## A.4 Conclusions

The choice of the form of cross-border activities is a fundamental right of financial groups. Nevertheless, an effective macroprudential framework addressing the concerns of both home and host authorities is needed regardless of the organisational choices made by financial institutions. The ESRB has already provided an important contribution in this area through the adoption of its framework for voluntary reciprocity of macroprudential measures. The ESRB will continue to support further work on how macroprudential policy can also be effectively conducted in a branch-based environment.

# Special feature B: Use of the countercyclical capital buffer – a cross-country comparative analysis[104]

**This special feature makes a cross-country comparison of the main features of the policy framework for the CCyB for a sample of European countries.** The set of countries considered includes those that had set a non-zero buffer rate before December 2017, as well as the four largest Member States that are not yet active CCyB users. These countries are compared along some key dimensions of their CCyB framework, such as the instrument's policy objective, the extent to which the rate-setting process relies on rules or discretion, the indicators used in the process, etc.

## B.1 Importance of the CCyB

**The CCyB is the main macroprudential instrument in the EU to address cyclical risks resulting from excessive credit growth to the private non-financial sector.** Macroprudential authorities are confronted with a wide range of issues when using this instrument due to its relatively recent introduction. These issues include, for example, identifying the current phase of the financial cycle, selecting the indicators that signal the level of the cyclical risk, estimating the appropriate buffer level and its impact, etc. A cross-country comparison of the frameworks in place may assist national authorities in learning from each other's practices.

**From its inception, the ESRB has devoted considerable efforts to supporting the national implementation of the CCyB regime.** In line with its responsibilities in this area under the CRD, the ESRB issued its Recommendation 2014/1 on guidance for setting CCyB rates. This was followed by Recommendation 2015/1 on recognising and setting CCyB rates for exposures to third countries (see Section 4.2). The ESRB Handbook on Operationalising Macroprudential Policy in the Banking sector devotes a separate chapter to the CCyB. An ESRB Macroprudential Commentary gave an overview on the indicators national authorities use when deciding on the CCyB level.[105] Finally, the ESRB periodically publishes detailed country information on the use of this instrument.

**Because of its macroprudential tasks, the ECB also has a particular interest in this instrument.** The ECB assesses the national CCyB rates and can apply higher requirements for capital buffers (including the CCyB) than those applied by the authorities of Member States that joined the SSM following Article 5 of the SSM Regulation.[106] In doing so, the ECB has to take into account the specific economic and financial situation of the Member State concerned.

**The CCyB is coming increasingly into focus as a possible policy lever to build bank resilience against future stress in the financial system.** This is supported by the fact that there are indications that the financial cycle in several European countries is turning (Figure B.1 ). Moreover, in the course of 2017, several Member States activated this instrument or decided to

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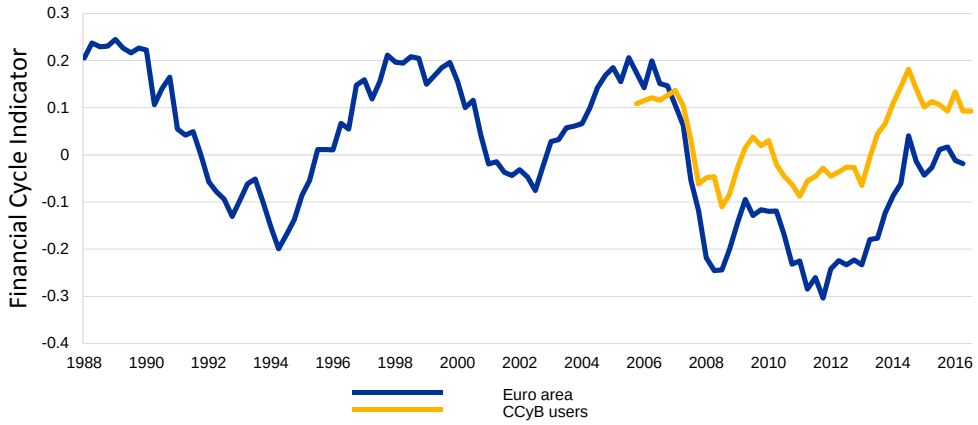
104 Prepared by Domagoj Babić with input from Frank Dierick and Niamh Hallissey (all ESRB Secretariat).

105 Pekanov, A. and Dierick F., "Implementation of the countercyclical capital buffer regime in the European Union", *ESRB Macroprudential Commentaries*, No 8, ESRB, December. 2016.

106 Council Regulation (EU) No 1024/2013 of 15 October 2013 conferring specific tasks on the European Central Bank concerning policies relating to the prudential supervision of credit institutions.

further increase the buffer rate (see Section 4.1). The CCyB can potentially have an important impact on credit provisioning during downturns and relatively benign costs during the upswing phase.[107]

Figure B.1
**Financial cycle is turning – financial cycle indicators**




Source: Schüler, Hiebert and Peltonen (2015), "Characterising the financial cycle: a multivariate and time-varying approach", *ECB Working Paper Series* No 1846, September.
Notes: Financial cycle indicators are obtained from the quoted paper. The series for the euro area and three active users of the CCyB (SE, SK, UK) for which the indicators were available are displayed in blue and yellow, respectively. The aggregation for the latter group was done on a GDP-weighted basis.

**Even though the guidance available from the Basel Committee on Banking Supervision (BCBS) and ESRB for the use of this instrument is extensive, concrete implementation differs substantially across countries.** Many countries have set their CCyB rate at a different level to that implied by the Basel buffer guide as suggested by Recommendation ESRB/2014/1 (see Figure B.2). This is not surprising, as the CCyB regime in the EU follows the principle of "guided discretion", i.e. a rule-based approach combined with discretion on the part of policymakers.

The CRD IV/CRR requires national authorities to publish their decision on the buffer rate and the buffer guide on a quarterly basis. The latter is a benchmark buffer rate linked to the reference indicator. The main reference indicator used is the standardised credit gap or credit-to-GDP gap, i.e. the deviation of the credit-to-GDP ratio from its long term trend. Some countries point to the inadequacy of the credit gap as a risk indicator under their (post-crisis) domestic circumstances. In addition, for most countries, the credit gap buffer guide points to inaction due to the deeply negative values of the indicator in the wake of the financial crisis (see Section 4.1). Countries using various (nationally adjusted) measures of credit gaps as well as other cyclical risk indicators as reference indicators thus have several buffer guides or benchmark buffer rates.[108] Under the principle of

[107] See Benes, J. and Kumhof, M., "Risky bank lending and countercyclical capital buffers," *Journal of Economic Dynamics and Control*, Vol. 58(C), 2015, pp. 58-80.;"The FPC's strategy for the countercyclical capital buffer", in *The framework of capital requirements for UK banks - Supplement to the December 2015 Financial Stability Report*, Bank of England, Uluc, A. and Wieladek, T.; "Capital requirements, risk shifting and the mortgage market," *Working Paper Series* No 2061, European Central Bank, 2015; "A policy-induced one-percentage point (pp) increase in capital buffers extends credit to firms by 9 pp, increasing firm employment (6 pp) and survival (1 pp)" during times of duress; Jiménez, G., S. Ongena, J. L. Peydró and J. Saurina; "Macroprudential Policy, Countercyclical Bank Capital Buffers and Credit Supply: Evidence from the Spanish Dynamic Provisioning Experiments", *Journal of Political Economy,* 125 (6), pp. 2126-2177, 2017.

[108] *Buffer guide* refers to a guide that connects a level of an indicator (e.g. the credit gap) with a level of the buffer rate.

guided discretion, national authorities are encouraged to exercise judgement in heeding signals from different references.

## B.2 Key features of the CCyB frameworks

**All Member States have so far published their CCyB frameworks, thus allowing an insight into the decision-making process and the indicators informing the rate-setting.** Authorities that had decided on a positive CCyB rate before December 2017 (CZ, IS, NO, SE, SK, and UK) as well as the four largest EU Member States which have not yet done so (DE, ES, FR and IT) provide a relevant sample of countries for gaining insight into the national approaches regarding this tool. Table B.2 at the end compares these ten countries in terms of some key characteristics of their CCyB frameworks. Different practices present an opportunity to analyse in greater detail the implementation of the regime across countries.

### a) Designated authorities

**Of the countries examined, it is mainly the central bank or the financial supervisory authority (if different from the central bank) which is the designated authority.** The designated authority refers to the authority responsible for the setting of the CCyB rate. In three out of the six countries that have set the CCyB at a positive rate, this is the central bank (CZ, SK, UK). Of the remaining three, Sweden and Iceland have assigned this task to the financial supervisory authority (Finansinspektionen or FI and Fjármálaeftirlitið or FME, respectively). In Norway, the Ministry of Finance sets the rate following the advice of the central bank, which is responsible for preparing a decision basis and advising the Ministry. In two of the four largest Member States which have not set it at a positive rate yet, the CCyB rate setting is also in the purview of the central bank (IT, ES). As in Sweden and Iceland, the financial supervisory authority sets the buffer rate in Germany (BaFin), while in France this task is performed by HCSF, the macroprudential authority.

**The financial supervisory authorities that set the buffer rates also consult with other authorities.** In Iceland, following the analysis by the Systemic Risk Committee (SRC), the Financial Stability Council (FSC)[109] issues a recommendation on the appropriate buffer rate to the FME which has responsibility for setting the rate. In Germany BaFin prepared the CCyB framework together with the Bundesbank.

**Designated authorities other than the central bank usually rely on the central bank to provide analysis and data.** As mentioned above, this is the case in Norway. The French HCSF[110] also relies on the central bank's expertise for conducting research and identifying and monitoring key systemic risk indicators, especially based on its early warning system. In Germany, the Bundesbank contributes to the decision-making by providing data and analytical input to BaFin. The Financial Stability Committee may issue a recommendation on the CCyB rate to BaFin.

### b) Publication of the policy framework

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[109] The FSC is comprised of the Minister of Finance and Economic Affairs (chairman), the Central Bank Governor, and the Director General of the Financial Supervisory Authority. The SRC, which is composed of two representatives from the central bank, two from the FME and one independent expert appointed by the Minister of Finance, is tasked with assessing the current state and outlook for the financial system, systemic risk, and financial stability. The SRC provides recommendations to the FSC.

[110] The HCSF is comprised of high ex officio members (Minister of Finance, Governor of the Banque de France, as well as the representatives of the Prudential Supervisory and Resolution, Financial Markets, and Accounting Standards authorities), but with an addition of three qualified members, usually academics.

**All Member States have developed a methodological framework for their rate-setting decisions, but they differ in their approach to the publication of the framework and communication strategy.** The most important difference stems from the framework's transparency regarding buffer guides and indicators informing national authorities' rate decisions. None of the countries examined have a mechanical rule linking the CCyB rate to some indicator level. However, national authorities communicate their key indicators, buffer guides, target variables' levels, etc. For instance, while some countries publish a buffer guide connecting an indicator value with the buffer rate (CZ, SK), and some publish a less explicit guide with the rate range (UK), others imply that they will increase the rate if their key indicators reach historically observed pre-crisis levels (IS, NO). Frameworks and separate studies published by the authorities also examine the usefulness of certain indicators (especially the credit-to-GDP gap) for measuring and indicating the level of the cyclical risk in their country.

CNB has published a comprehensive framework outlining its approach for setting the CCyB rate in the Czech Republic[111]. It further presents the main indicators used and their calibration (such as in the case of the aggregate financial cycle indicator or FCI and the nationally adjusted credit gap). Four buffer guides are presented and discussed. The Bank of England's Financial Policy Committee (FPC) has also published a detailed CCyB framework[112] which implicitly points to bank stress test results as an important buffer guide. The FPC further discusses phases in the financial cycle and an appropriate buffer rate range in each phase. It also considers the trade-off between the cost of additional capital requirements and their benefit during the downturn.

Most of the other countries have published frameworks which predominantly analyse key indicators used to inform the buffer rate decision, although without an explicit or implicit buffer guide. Norges Bank and the Icelandic Financial Stability Council analysed their four key indicators in detail, while NBS focused on its composite cyclical risk indicator (so-called cyclogram). Most frameworks test the appropriateness of using the standardised and adjusted (domestic) credit-to-GDP gap for assessing cyclical risks nationally. The credit gap buffer guide is usually shown as the only guide in national frameworks (DE, ES, FR, IT, SE, SK).

### c) Policy objectives

**The CCyB is tasked with two policy objectives: (i) building resilience during the upswing of the financial cycle; and (ii) dampening the financial cycle.** In their frameworks and analyses, active users of the CCyB differ on the weight they put on these two objectives.

**Many countries view the potential moderating effect on the build-up phase of the financial cycle as a positive side effect, rather than the CCyB's primary aim.** This position is in line with the BCBS guidance.[113] The justification behind such an approach, besides the lack of consensus in the relevant literature,[114] is the rather small projected impact that CCyB rates between 0% and 2.5% might have on credit growth during the financial upswing.[115]

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111 Hájek, J., J. Frait, and M. Plasil, "The countercyclical capital buffer in the Czech Republic", *Czech National Bank/Financial Stability Report, 2016/2017.*

112 Bank of England, 2015., "The Financial Policy Committee's approach to setting the countercyclical capital buffer - A Policy Statement", April 2016.

113 Basel Committee on Banking Supervision, "Guidance for national authorities operating the countercyclical capital buffer", 2010.

114 See, for instance, Drehmann, M. and L. Gambacorta, "The effects of countercyclical capital buffers on bank lending", *Applied Economics Letters*, 19(7), pp. 603-608, May 2012, Jiménez et al. (2012), Bank of England ( 2016). etc.

115 See, for instance, Jiménez et al. (2017), Bank of England (2015), "Criteria for an appropriate countercyclical capital buffer", *Norges Bank Papers* No 1/2013, etc.

Similarly, Norway, while outlining the relatively small (projected) impact of the CCyB on credit growth, notes that the CCyB may also curb high credit growth.[116] CNB also notes the possibility of the CCyB's usefulness in achieving the second objective, but does not view it as the main purpose. Accordingly, some countries – such as the United Kingdom, Sweden, Iceland and Germany – primarily use the instrument to build resilience. The FPC emphasises the use of the CCyB as a resilience-building tool in its strategy paper of December 2015 and policy statement of April 2016. Restraining credit growth is not the primary objective for this instrument and should usually not be expected to guide its setting.[117]

**Others place equal weight on both objectives.** The Banca d'Italia intends to use the instrument to target them both. Spain, perhaps due to its experience with countercyclical provisions (2000-16),[118] recognises the possibility of the CCyB dampening the build-up of excessive credit growth ("containing exuberance") and views taming the cycle as a very important goal.[119] French authorities identify the second objective – "limiting procyclicality" – as an indirect objective. Accordingly, HCSF uses two slightly different sets of indicators concerning the direct and indirect objectives in order to inform its decision on the buffer rate.

### d) Rules vs. discretion

**While all countries follow the principle of guided discretion in the rate-setting process, there are considerable differences in its practical implementation.** The credit gap buffer guide is not mechanically implemented (see Figure B.2). For instance, CNB uses the aforementioned four buffer guides that inform the decision on rate-setting. Even though these buffer guides might be considered to be more or less formal rules, there is still a considerable degree of discretion involved as CNB may decide to put different weights on the implied rates from different buffer guides.[120] For instance, the CCyB rates implied by the additional credit gap, the conditional distribution of future credit losses, the financial cycle indicator, and the duration of the expansionary phase of the financial cycle, respectively, were all different from each other in the third quarter of 2017, save for the last two.

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116 Norges Bank, 2013.

117 "[restraining credit growth]…is not its primary objective and will not usually be expected to guide its setting." (Bank of England, 2015, p. 15).

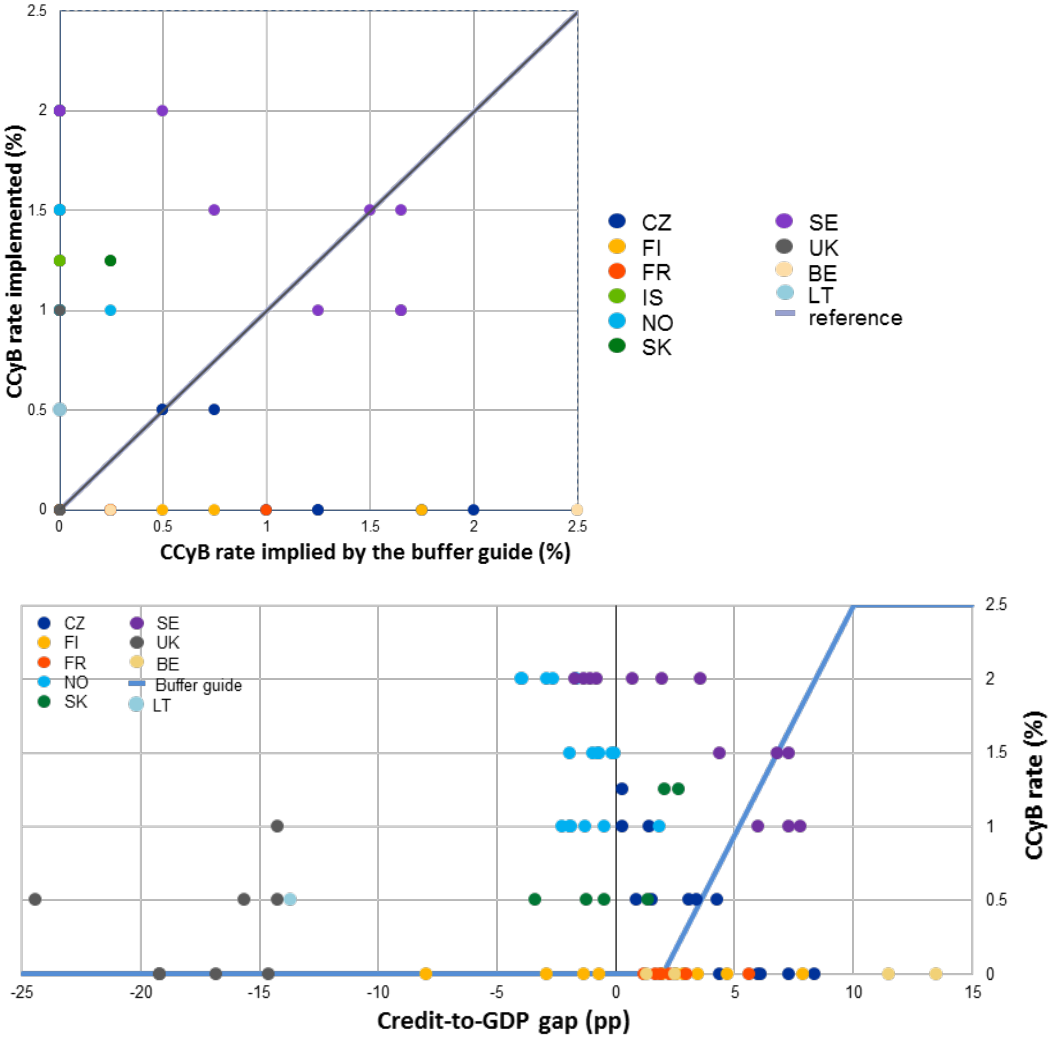
118 See Saurina, Jesús and Carlos Trucharte, *Countercyclical provisions of the Banco de España 2000-2016.* Banco de España, 2017.

119 Banco de España Report on banking supervision in Spain, 2016, pp. 59-60; see also Castro, Christian, Ángel Estrada and Jorge Martínez, "The countercyclical capital buffer in Spain: an analysis of key guiding indicators", *Working Papers* 1601, Banco de España, 2016, p.7., f1.

120 "The final decision on the CCyB rate is not based on mechanical application of the said approaches and always takes into account the results of a comprehensive assessment of systemic risks", see CNB, *Financial Stability Report,* 2016/2017, p. 83.

Figure B.2

**The credit-to-GDP gap buffer guide in practice**




Source: ESRB (2014-2017).
Notes: Iceland is not shown due to spacing constraints, as its credit gap is in excess of -90pp. Despite not having activated the CCyB, Belgium, Finland and France are included as at different points in time their buffer guides pointed to a positive buffer rate. Many data points overlap and are thus not visible.

The Czech practice is very similar to the one of NBS, which also uses its own composite financial cycle indicator (cyclogram), but does not necessarily take its implied buffer rates as a guide. Discretion is also used when considering the buffer rates implied by different credit gap measures.[121] A principle the Slovak authorities explicitly follow is to use the CCyB only in the face of excessive credit growth. The FPC, as discussed below, starts in the rate-setting process from the premise that the size of the CCyB should ensure that total capital buffers correspond to the banking sector's potential losses (as measured in the annual stress test). Since other factors and indicators play an important role too, there is still room for some discretion. The FPC's CCyB strategy also includes a rule of thumb linking the financial cycle stage to the buffer rate range (see Table B.1).

[121] Commentary to Decision No 11/2017 of Národná banka Slovenska of 24 October 2017 on the setting of the countercyclical capital buffer rate, Table 3, p. 15.

Table B.1
**FPC's rule of thumb for setting the CCyB**

| Stage | Risk environment | CCyB rate |
|---|---|---|
| **1** | Risks very subdued (e.g. post-crisis) | 0% |
| **2** | Standard risk environment | ≈1% |
| **3** | Risks become elevated | >1% |
| **4** | Risks crystallise | $[0\%, 1\%\rangle$ |

Source: Bank of England (2016).

**In the majority of countries investigated, the CCyB rate-setting process tends to involve more discretion.** Other countries considered (DE, ES, FR, IS, IT, NO, SE) did not explicitly publish rules for rate-setting or buffer guides other than a buffer guide based on the standardised credit gap, thus complying with Recommendation ESRB/2014/1.

**e) Neutral rate**

**Very few countries explicitly discuss the CCyB rate in the standard risk environment.** When risk is at a tolerable, pre-determined level, the CCyB rate set in that environment could be thought of as being neutral. Since in many countries risks are re-emerging from their post-crisis subdued environment, the setting of the CCyB rate in the standard risk environment – in which risks are neither elevated nor subdued – is becoming more important. Despite this, very few countries discuss it in their frameworks.

Although higher CCyB rates always imply tighter policies, it is unclear if there is a positive rate that should be considered neutral in the sense of merely allowing the policymaker to reach a predetermined target in the future (and not automatically reflecting tight policy amidst the build-up of systemic risk).[122] The CCyB's neutral rate could be such that the costs for banks (and through its effects for lending to the real economy) are deemed appropriate in terms of having resilient and well-capitalised banks in a crisis.[123] In this trade-off, there is a certain level of risk in the "standard risk environment" which defines the size of the counterfactual benefit.

**In the United Kingdom, the FPC's calibration of the neutral rate reflects its overall risk tolerance.** The neutral rate is to be set in the region of 1% in a standard risk environment and kept under review. A standard risk environment for the United Kingdom is defined as one in which borrowers tend not to be unusually extended or fragile, asset prices would be unlikely to

[122] "The countercyclical capital buffer should be built up when aggregate growth in credit and other asset classes with a significant impact […] are judged to be associated with a build-up of system-wide risk", CRD IV (e.g. recital 80), ([1]) OJ L 331, 15.12.2010, p. 1.

[123] See Akram, F., "Macro effects of capital requirements and macroprudential policy", *Economic Modelling,* No 42 (2014), pp. 77-93.

consistently show signs of over/under-valuation, and "risk appetite" measures are in line with historical averages.[124]

The FPC's calibration of the neutral rate at 1% reflects its overall risk tolerance. The stress test results inform this judgement, given the FPC's guiding strategy for the CCyB to match the total capital buffer to predicted losses under stress. Both the 2016 and 2017 stress test scenarios resulted in a reduction in banks' capital by around 3.5% of domestic risk-weighted assets. As a fully phased in capital conservation buffer would be equal to 2.5% of risk-weighted assets, the FPC concluded that a CCyB rate in the region of 1% would be consistent with the banking system having the capacity to absorb a macroeconomic downturn of the severity embodied in these stress tests (i.e. of a greater magnitude than those observed on average in post-war UK recessions).[125]

The CCyB will be set to ensure resilience to the annual stress test, underscoring bank resilience as the primary goal of the UK framework. The severity of that stress test will be increased as cyclical risks grow and reduced as they abate, resulting in a countercyclical strategy. The FPC also explicitly expressed the intention of changing the neutral buffer level if the structure of banks' balance sheets were to change. The estimated neutral CCyB rate thus depends on the sensitivity of banks' equity to a standard risk level.[126] The stress test is also supplemented with quarterly risk assessments across a range of indicators (see below) and an analysis of the costs of moving the CCyB at any given time.

**The Czech authorities are sympathetic in their communication to setting the neutral CCyB rate at a level greater than zero.** CNB also considered another approach to setting the CCyB rate that focuses on historical performance and patterns as experienced by the Czech banking sector. CNB recognises the average length of an expansion phase in the financial cycle to be five years. During this period sufficient resilience should be built up in the domestic banking sector. Therefore, a rough rule of thumb implies that the rate should be increased by at least 0.5 pp in each year of the expansion phase.[127] CNB's increase of the CCyB to 1% in June 2017 – while noting that the "domestic financial sector remains stable and resilient" – is also consistent with this rule. Very recently, Lietuvos bankas also explicitly defined the neutral CCyB rate at 1%.[128]

### f) Indicators used in the rate-setting process

#### *Indicators for the activation or increase of the CCyB*

**Member States rely on a number of different indicators to assess cyclical and systemic risks.[129]** This is encouraged by the BCBS and required by Recommendation ESRB/2014/1 due to the difficulties in measuring the financial cycle and the risks of relying on just the credit gap. National authorities explicitly list several indicators they observe and consult when deciding on the buffer rate, some as many as around 20-30 (e.g. the United Kingdom). The Czech Republic and Slovakia have developed their own composite measures of cyclical risks. Some indicators have been assigned a more prominent role in national authorities' policy communication to the public.

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124 Bank of England (2016).

125 Bank of England (2016), see the *Record of the Financial policy committee meetings – 23 and 29 November 2016*, p. 18, §76.

126 Bank of England (2015).

127 See Hájek, Frait and Plašil (2017).

128 On 20 December, Lietuvos bankas decided to activate the CCyB at 0.5%. Lietuvos bankas has been explicit in defining the neutral CCyB rate. In its principles for the application of the CCyB, Lietuvos bankas states that if economic growth and credit growth are sustainable and no cyclical imbalances form in the economy, it will aim at holding a CCyB of at least 1% accumulated. A further rate hike decision to achieve this target level could be reached as soon as in late 2018, should the current economic trends as well as trends in the financial system prevail.

129 See Pekanov and Dierick (2016).

These core indicators can be related to an individual national authority's stance regarding the two aforementioned objectives, as well as their relevance to the financial conditions on the national market. For instance, in Germany the CCyB's aim is linked to the type of indicators that will be closely monitored, i.e. bank credit to the private non-financial sector.[130] The adjusted credit gap accordingly includes such credit measures. BaFin is also closely monitoring the private sector debt burden, risk mispricing and the soundness of banks. NBS puts a strong emphasis on excessive credit growth, explicitly stating that even if other variables indicate an economic imbalance, the presence of excessive credit growth remains a prerequisite for increasing the CCyB.[131] The characteristics of the national banking sector, mainly financed by deposits and thus more susceptible to a curbing of credit provision in the face of higher capital requirements, may play a role in such a stance.[132]

The French authorities consult two different sets of indicators when considering the CCyB's direct (building resilience) and indirect objective (limiting cyclicality). A key indicator that guides HCSF's decisions regarding the direct objective is bank credit to the private non-financial sector – as a percentage of GDP, growth rates or the gap against its long-term trend. Indicators for the indirect objective are broader, including broad credit measures and overall risk measures related to macroeconomic, credit, market, liquidity, financing and solvency risks.

The Banca d'Italia, apart from using the adjusted credit gap, also uses indicators which reflect its concerns regarding the level of non-performing loans (NPLs). A set of indicators that have been empirically assessed as financial cycle drivers and as good predictors of the bad loans[133] ratio has been chosen. These include the unemployment rate, the bank credit growth rate, and the real house price gap.

**The Bank of England's intention to use the CCyB as an instrument to build bank resilience is reflected in its choice of indicators informing the rate decision**. The FPC's core indicators are grouped into three categories: (i) measures of non-bank balance sheet stretch, i.e. leverage in the private non-financial sector; (ii) measures of market conditions, i.e. new borrowing terms and investor risk tolerance; and (iii) measures of bank balance sheet stretch, i.e. leverage and maturity/liquidity transformation. Since its strategy for the buffer guide is to match total bank capital requirements to stress-test projected bank losses, the FPC considers the CCyB to be supplementary to the capital conservation buffer.[134]Accordingly, in its meeting records and communications, the FPC refers to the credit gap but also bank capitalisation,[135] bank share prices (incorporating investors' expectations of future profitability), and stress tests results.[136] Year-on-year growth in overall credit to the private non-financial sector is also compared to GDP growth.

**Norges Bank explicitly commits to following just four key indicators informing the buffer decision.** These are: (i) total credit to households and non-financial companies (NFCs) as a share of the GDP; (ii) the ratio of house prices to household disposable income; (iii) real commercial

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130 "The aim of the CCyB is to make the banking sector more resilient in the face of systemic risks associated with the credit cycle. For use of the CCyB, only the aggregate credit to the private nonfinancial sector is relevant." Tente, Stein, Silbermann, and Deckers, *The countercyclical capital buffer in Germany*, Bundesbank, 2015.

131 National Bank of Slovakia, *Financial Stability Report*, November 2016.

132 Norges Bank (2013), p. 7, see the *Quarterly report on the euro area,* 1/2011. See also *Economic impact of changes in capital requirements in the euro-area banking sector*, European Commission, p. 27.

133 For the Banca d'Italia, "bad loans" [it. *sofferenze*], are exposures to debtors that are insolvent or in substantially similar circumstances. Bad loans are a subset of NPLs.

134 Bank of England (2015), p. 9.

135 The FPC's desire not to alter capital standards after the decision to exclude central bank reserves from the exposure measure of the leverage ratio was specifically referred to. See the *Record of the Financial Policy Committee,* 25 July 2016, p. 7, §12.

136 See, for instance, the records of FPC Meetings held on 23 and 29 November 2016.

property prices; and (iv) the wholesale funding ratio of domestic credit institutions. Norges Bank explicitly dismisses a mechanical relationship between the indicators and its advice on the buffer rate. Even though the credit gap is not explicitly mentioned among the four key indicators, it is referred to in the quarterly Financial Stability Assessment. The credit gap is further decomposed into foreign and domestic debt to households and non-financial companies, respectively. Similarly, the Icelandic FSC observes a very similar set of four main indicators: (i) the credit-to-GDP ratio and its growth; (ii) credit growth; (iii) real estate prices; and (iv) the credit-to-GDP gap.

**Countries that have recently undergone structural changes tend to use markedly different indicators.** Short data series, a low base effect and financial deepening render some of the aforementioned indicators less useful for smaller and especially central and eastern European countries.

NBS created its own aggregate indicator of the financial cycle (cyclogram) to help set the CCyB rate.[137] It is composed of measures covering three categories expected to be linked to an excessive lending pattern: cycles, banks, and customers. To this aim, six core and seven supplementary variables assessing the developments in the three aforementioned categories are used.[138] The domestic credit-to-GDP and credit-to-GDP trend gap is one of them as a measure of the cycle.[139]

Similarly, CNB uses its composite financial cycle indicator (FCI), created to measure the accumulation of financial risks and to provide an early warning of their materialisation (six to eight quarters). The FCI consists of a wide range of indicators[140] and their weights are calibrated so that the FCI would best predict loan losses of banks. The FCI reflects the cross-correlation of indicators whose increase indicates falling financial risk aversion. The higher the indicator, the higher the risk tolerance and the cyclical risk are. If the correlation of inputs is perfect and the values of all sub-indicators are at the maximum, the FCI attains its theoretical maximum. Additionally, CNB closely monitors bank loans stock and flow and property overvaluation measures. CNB also uses three additional buffer guides: (i) a rule of thumb regarding the length of the upswing phase of the financial cycle (five years); (ii) the credit gap buffer guide; and (iii) the bank stress test results.

Implied losses from adverse stress-test scenarios also provide guidance for the CCyB. An adverse scenario is designed to test banking sector resilience to exceptionally large and implausible stress. However, the probability of such situations varies across the phases of the financial cycle. Against this backdrop, CNB estimates a conditional credit loss probability distribution where the potential size of the losses differs depending on the current phase of the cycle. The same idea of calibrating the buffer rate to cover potential banking sector losses contributed to the recent rate increase.

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137 Kupkovič, P. and Martin Šuster, "Identifying the financial cycle in Slovakia", 2nd Policy Research Conference, Ljubljana, 2016.

138 Core variables include the credit gap, the GDP gap (measures of the cycle), credit growth, NPL dynamics (measures of bank risk), and the debt burden for households and enterprises, respectively (measures of customer risk). Supplementary variables include the unemployment rate, real estate prices (cycle), enterprises' default rates, LTV ratios, lending conditions (banks), the housing affordability index, and consumer confidence (customers).

139 Rychtárik, S, "Analytical background for the counter-cyclical capital buffer decisions in Slovakia", *Biatec*, 22(4), Národna banka Slovenska, Bratislava, p. 15-6.

140 These include new loans, property prices, lending conditions, sustainability of the debt of NFC and households, asset prices and the adjusted current account deficit-to-GDP ratio. See Plašil, M., Seidler, J., Hlaváč, P. and Konečný T., "An Indicator of the Financial Cycle for the Czech Republic", Thematic Article, *Financial Stability Report, 2013/2014*, Czech National Bank, pp. 118-127.

Spain, due to its recent experience of a pronounced credit boom and bust, uses a set of indicators of credit "intensity" (the ratio of changes in credit to GDP), private sector debt sustainability, real estate prices and external imbalances which are judged to usefully complement the credit gap.[141]

**A first step in the calibration of the CCyB is to assess the current (and possibly forecast the next) stage in the financial cycle.** One of the challenges is setting a clear nominal threshold that would signal that a particular variable's trend is unsustainable or moving away from its equilibrium.[142] The equilibrium levels of some indicators (e.g. the credit-to-GDP ratio) and sustainable asset price growth rates are unlikely to be constant over time.[143] This is particularly the problem for countries with structural changes in their economies or experiencing convergence (e.g. CZ, SK).[144]

One way authorities approach this is by comparing the indicators with their observed historical values. Long-term averages and historical values from periods that are ex-post assessed as risky are used as benchmarks for signalling excessive credit growth.[145] The Slovak cyclogram, for example, is composed of a set of variables assessed against the distribution of their historical values. In the cyclogram, a number is assigned to each of the six core and seven supplementary variables[146] depending on its position in respective percentiles of its historical distribution since 2005. These 13 values are further aggregated by averaging. Cyclogram values are then used as the CCyB buffer guide by assigning the highest rate (2.5%) to the highest values. Similarly, the Czech FCI is assessed against its historical values before the crisis. CNB uses information on the value of the FCI's highest peak in the previous cycle and assigns to it the highest rate of 2.5%. Furthermore, the median of the sub-indicators included in the FCI is assumed to correspond to an equilibrium in which the cycle is neither subdued nor overheating. All this is reflected in the calibration of the buffer guide based on the FCI values.[147] Other countries observe long-term historic trends of their main indicators (e.g., NO, SE). Some authorities also choose their indicators based on their hypothetical ex-post usefulness in signalling the risk build-up before crises in the past (e.g. CZ, ES, FR, IS, IT).

### *Indicators for the release of the CCyB*

**Most countries use measures of market and bank-funding stress to inform the decision to release the CCyB.** Bank CDS spreads, LIBOR, OIS premia and the composite indicator of systemic risks (CISS)[148] are the most often mentioned indicators in national authorities' frameworks (e.g. DE, ES, FR, UK). This is in part due to the fact that they are explicitly mentioned in Recommendation ESRB/2014/1. Market stress indicators are used in Sweden and stress test results are used in the United Kingdom, though, given that stress test results are generally annual, they may be less informative in the release phase of the CCyB than in the build-up phase.

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141 Castro, Estrada and Martínez-Pages (2016); Mencía, Javier and Jesús Saurina, "Macroprudential policy: objectives, instruments and indicators", *Occasional Papers* 1601, Banco de España, 2016.
142 Rychtarik, p. 13.
143 Bank of England (2015), p. 17.
144 Gersl, Adam, and Jakub Seidler, "Excessive credit growth as an indicator of financial (in)stability and its use in macroprudential policy", *Financial stability report, 2011 (2010)*: pp.112-122., p. 119.
145 Rychtarik, pp. 13-4; Hájek, Frait and Plasil, pp. 110-1.
146 Core variables include the credit gap, the GDP gap, credit growth, NPL dynamics, and the debt burden for households and enterprises, respectively. Supplementary variables include the unemployment rate, real estate prices, enterprises' default rates, LTV ratios, lending conditions, housing affordability index, and consumer confidence.
147 Hajek, Frait and Plasil, p. 112.
148 Holló, Dániel, Kremer, M. and Lo Duca, M., "CISS – A composite indicator of systemic stress in the financial system*", ECB Working paper series, No* 1426, March 2012.

Norges Bank finds that its aforementioned four main CCyB indicators are not well suited for signalling the need to reduce the buffer. Instead, market turbulence and bank loss prospect measures are used to assess a rate cut. Norges Bank also emphasises that the buffer rate should not be reduced automatically, even if there are signs that financial imbalances are receding. In addition to measures of bank-funding stress, CNB uses mostly the FCI for its signalling properties when forming a decision on the release of the CCyB. Despite having devised a national cyclical risk measure (cyclogram), NBS tends not to use market measures. This is due to the fact that the banking sector is predominantly funded by customer deposits. NBS notes that CISS-like indicators are not relevant in Slovakia, as there is virtually no financial market. Therefore, balance sheet indicators rather than financial market data are used to assess a potential buffer release.

**Some countries have not yet finalised their choice of indicators for the release of the buffer.** This is also indicative of their "forward guidance" in terms of their belief and intention not to release it (or not to build it up in the first place). The Banca d'Italia expects the CCyB rate to remain at zero for some time and has therefore not yet finalised its methodology for releasing the buffer. While the central bank mentions variables that it might monitor (such as bank CDS spreads, the net liquidity position, indicators of systemic liquidity risk in the Italian financial markets), it has not stated how these variables might be used. Nor has it yet published the measures of funding stress and indicators for general systemic stress in the decision on the CCyB rate, though it plans to do so in the future. Similarly, the Icelandic authorities also explicitly state that they have not yet developed release indicators or a specific methodology.

### g) Forward guidance

**As there is a 12-month implementation lag following a decision to increase the CCyB rate, authorities have some room to shape expectations**. The UK's FPC is committed to move the CCyB rate early and gradually in order to reduce its economic cost, for example relating to: (i) the uncertainty about its impact on credit conditions and the real economy; and (ii) any transaction costs. The FPC expects the CCyB to play an important role in shaping banks' expectations, which could further multiply the CCyB's impact[149]. If banks adjust their expectations and thus anticipate that a buffer rate increase will be followed by further increases if excessive risk-taking continues, they may collectively reduce their risky lending. Similarly, the Banca d'Italia uses its analyses of the current and prospective conditions of the financial system to define its macroprudential policy stance and help build expectations on the future level of the CCyB rate. On the other hand, in Slovakia, Rychtárik (2014) commented that the forward guidance regarding the CCyB rate would be neither appropriate nor possible, but at the same time surprises should be avoided.[150]

**All countries use their rate decisions to communicate expectations and financial stability analysis to the public.** By supplementing the decision with analytical commentary and supporting key indicators, most authorities exercise forward guidance regarding the future buffer rate. Despite the considerable amount of discretion, the authorities that use and have published buffer guides (CZ, SK) still have a stronger case for anchoring expectations, as the predictive power of the CCyB rates implied by the buffer guides could be assessed against the authority's track record. For instance, hypothetically speaking, if the buffer rates implied by the FCI values happen to be the closest to the CCyB rates implemented by CNB, the public could use the current FCI value to predict the next-quarter CCyB rate with a higher degree of certainty. Similarly, the FPC's expected buffer rate ranges for four stages of the financial cycle also serve to anchor market expectations.

[149] Bank of England (2015), p. 19.
[150] Rychtarik, p. 15.

**Some countries refer to their expected decision in the forthcoming period (e.g. CZ, IS, SK, UK).** The UK's FPC has on occasion published its expectations regarding its rate decision in the next meeting as a part of its policy meeting statement. If it decides to reduce the CCyB rate, its decision takes immediate effect and, as with all designated authorities under CRD IV, the FPC is required to indicate the period in which the rate will not be increased and its rationale for that. Similarly, in their commentary to the CCyB decisions, the Slovak authorities have a chapter on the potential application of macroprudential policy instruments over the medium-term horizon. They assess the expected developments in the CCyB rate in the next quarter with regard to the current indicator trends, explicitly stating whether they imply a need to increase or decrease the buffer rate in the next quarter.[151]

Some countries that rely on the credit gap as the key indicator (FR, IT) and observe its deeply negative values tend to signal their expectation to keep the CCyB rate at zero for some time. The UK's FPC in its CCyB strategy noted that in a post-crisis recovery phase it expects to set the rate at zero for a prolonged period. However, it also committed to setting the rate in the region of 1% in the standard risk environment, while most of the other countries – perhaps due to their different financial cycle phase – have not yet signalled their neutral rate for the standard risk environment this far ahead. On the other hand, countries that have built up the CCyB (IS, NO, SE) expect not to release it for the time being.

## B.3 Conclusions

**The differences in the implementation of the CCyB regime described above point to many mutually dependent decisions policymakers have to take when using the CCyB.** One of the most important decisions relates to the emphasis placed on leaning against the cycle relative to building resilience in setting the objectives of the CCyB, as well as the macroprudential instrument's cost-benefit trade-off. These common issues are tackled by different approaches in the examined countries. Policymakers' risk tolerance and preferences, as well as national specificities, such as institutional and structural features of national financial systems, are important factors in these considerations. It is also revealing that substantial differences in national frameworks and their application exist for a macroprudential instrument for which much guidance from international and European bodies is already available.

**Going forward, the CCyB's place in the national macroprudential policy platform might help to inform and communicate the cyclical macroprudential policy stance for a country's banking sector.** The trade-offs mentioned appear in other decisions concerning macroprudential policy and examining different approaches in various European countries could lead to a more complete understanding of the stance of different macroprudential authorities. This is especially relevant due to the CCyB's general and cyclical nature as well as its increasing importance due to the shifting phases of the financial cycle.

[151] See the *Quarterly commentary on macroprudential policy*, National Bank of Slovakia. July 2017, p. 10.

Table B.2
**Cross-country comparison of the CCyB frameworks based on some key features**

| | CZ | IS | NO | SE | SK | UK | DE | ES | FR | IT |
|---|---|---|---|---|---|---|---|---|---|---|
| **Designated authority type**[152] | Czech National Bank/Česká národní banka | Financial Supervisory Authority, on Financial Stability Council's recommendation | Ministry of Finance, on Norges Bank's advice | Finansispektionen | National Bank of Slovakia / Národná banka Slovenska | Financial Policy Committee (Bank of England) | BaFin | Banco de España | Haut Conseil de stabilité financière / High Council for Financial Stability | Banca d'Ítalia |
| | **1** | **2** | **3** | **2** | **1** | **1** | **2** | **1** | **4** | **1** |
| **Framework publication** | Published strategy with buffer guides and financial cycle estimates | Published framework, no explicit or implicit buffer guide | Published framework, explicitly analysed four key indicators. No explicit buffer guide | Published framework, no explicit or implicit buffer guide | Published strategy detailing indicators and their composition, no buffer guide | Published strategy implicitly pointing to stress test results as a buffer guide; with financial cycle estimates | Published framework, explicitly analysed credit gap as a key indicator. No explicit buffer guide | Published strategy detailing indicators and their composition, no buffer guide | Published strategy detailing indicators and their composition, no buffer guide | Published strategy analysing indicators in detail. Credit gap implicit buffer guide |
| **Building resilience vs. taming the cycle** | Primarily building resilience. Taming the cycle potential side-effect | Primarily building resilience | Resilience primary objective; taming the cycle mentioned | Building resilience | Primarily building resilience, taming the cycle positive side effect | Primarily building resilience | Primarily building resilience | Both, greater importance on taming the cycle | Both; building resilience is a direct objective, taming the cycle indirect one | Both |
| **Rules vs. discretion** | Guided discretion. Financial cycle indicator, stress tests and rule of thumb as buffer guides | Mostly discretion | Mostly discretion | Guided discretion | Guided discretion. Use of the cyclogram as a rough rule/buffer guide | Guided discretion. Incurred losses from stress testing as a buffer guide; rule of thumb linking rate to financial cycle stage | Rule guided discretionary decision | Guided discretion | Mostly discretion | Mostly discretion |
| **Neutral rate** | >0% Dependent on stress test results, total buffer to cover predicted losses | 0% | >0% The buffer rate should not be reduced automatically | 0% | 0% | 1% Dependent on stress test results, total buffer to cover predicted losses | 0% | 0% | 0% | 0% |

[152] 1 = central bank, 2 = supervisory body, 3 = government authority, 4 = other.

| | | | CZ | IS | NO | SE | SK | UK | DE | ES | FR | IT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Core indicators** | **Increase** | | Bank stress test results (conditional distribution of credit losses)<br>Financial cycle indicator<br>Developments in credit stocks and flows | Credit growth<br>RE prices<br>Credit/GDP ratio and its growth | Credit/GDP<br>House prices/household disposable income<br>CRE prices<br>Banks' wholesale funding ratio | HH, NFC debt<br>Credit growth<br>House prices /disposable income<br>Current account<br>Credit forecasts<br>Bank capital ratio<br>Debt service ratio | Credit growth<br>*Cyclogram* | HH debt<br>Credit spreads, Bank capitalisation<br>Bank stress test results | Private sector debt burden, RRE (credit growth & prices), soundness of banks<br>Risk mispricing | Debt sustainability<br>Δ Credit/GDP<br>RE prices<br>External imbalances | Building resilience: bank credit to private NFI / GDP, its growth and gap<br>Limiting procyclicality: broad credit to private NFI / GDP, growth, gap, variations RRE prices | Financial cycle drivers, predictors of bad loans ratio (unemployment rate, bank credit growth rate, and real house price gap) |
| | | Credit gap | Additional credit gap (shorter time series) is one of the main indicators | Credit-to-GDP gap one of the four key indicators; initially was misleading | Not used but occasionally referenced; gap decomposed into domestic and foreign credit | Deemed to give an inaccurate reflection of risk[153] | Standardised and domestic credit-to-$-GDP_{trend}$ gap;[154]<br>Also part of the cyclogram | Deemed to give an inaccurate reflection of risk[155] | Credit-to-GDP gap (adjusted, bank credit) main indicator | Credit-to-GDP gap (adjusted) main indicator | Credit-to-GDP gap (adjusted) key indicator for both objectives | Credit gap (bank and total credit), adjusted filter main indicator |
| | **Release** | | Bank-funding stress<br>Financial cycle indicator | Still under development | Market turbulence<br>Bank losses prospects | Market stress indicators<br>Stress test results | Banks' balance sheet indicators | Financial stress indicators | CISS-based systemic risk indicator<br>Realised risks | CISS<br>OIS, CDS spreads | Market stress indicators | Still under development |
| **Forward guidance** | | | Forward guidance implied from the buffer guides and announcements | Expressed the intent not to release the CCyB for the foreseeable future | Expects to keep the rate elevated and not finetune it[156] | Due to high HH indebtedness, implicitly expects risks to remain elevated and buffer at the high level | Forward guidance implied from the key indicator (*cyclogram*) and explicitly tied to credit growth[157] | Forward guidance as per strategy.<br>Signalled future CCyB neutral rate (1%).<br>Important role shaping banks' expectations | No forward guidance | Discussing credit gap, anchored the expectations not to increase the CCyB in the near future | Discussing credit gap, anchored the expectations not to increase the CCyB in the near future | Expect the rate to be zero for quite some time.<br>Intention to define MaP stance and help build expectations |

153 "[…leads] FI to conclude that the buffer guide currently provides an inaccurate reflection of the risks and that the buffer guide should be given minimal consideration when determining the appropriate size of CyCB."
154 "Due to the shortage of time series, the credit-to-GDP gap indicator does not actually perform as a reliable buffer guide indicator."
155 "It was required in legislation to consider this indicator but the long-run trend on which it was based gave undue weight to the rapid build-up in credit prior to the global financial crisis."
156 "The buffer rate should not be reduced automatically even if there are signs that financial imbalances are receding. The CCyB is not an instrument for fine-tuning the economy."
157 "Accelerating credit market trends are increasing the likelihood of an increase."

# Special feature C: Cross-country comparison of the O-SII buffer application[158]

**This special feature makes a cross-country comparison of the O-SII buffer application in the EU.** To that end, it starts by briefly describing the approaches to the O-SII buffer calibration by Member States and compares the resulting buffer levels set across the EU to assess whether they sufficiently cover the systemic risk posed by O-SIIs. It then describes the use of other instruments deployed by national authorities to reach the target level of capital buffers for SIIs which they deem adequate to cover the risk. The special feature finishes by analysing whether the systemic risk of O-SIIs can be sufficiently mitigated by the O-SII buffer in light of the existing legal restrictions on buffer levels ("caps").

## C.1 Methodologies used to identify O-SIIs and calibrate O-SII buffers

**Most authorities follow the guidelines that the EBA issued on the identification of O-SIIs.** Article 131(3) of the CRD specifies that the assessment of O-SIIs should be based on at least any of the following four criteria: (i) size of the institution; (ii) importance (including substitutability/financial system infrastructure); (iii) complexity/cross-border activity; and (iv) interconnectedness. The EBA guidelines[159], which were published in 2014, establish a scoring process for assessing the systemic importance of an institution based on a number of mandatory and optional indicators for each of these four criteria. The assessment is done at national levels and reflects mainly the concentration of the national banking system. The outcome of the assessment, which is conducted on a yearly basis, is a score allocated to the institution. This score is expressed in basis points and goes from 0 to 10,000: the higher the score, the higher the systemic importance of the institution. In addition, supervisory judgement should be used where appropriate to reflect features of the national banking systems which are particularly important given the divergence across Member States.

Estonia, Latvia, Malta and Slovenia have been assessed by the EBA as non-compliant with the EBA guidelines.[160] Half of the authorities use only the mandatory indicators of the guidelines to identify O-SIIs, while the other half uses additional indicators or supervisory judgment to complement the mandatory indicators[161]. Eight authorities used the option to adjust the standard threshold of 350 bp for O-SII identification to either 275 bp for more diversified markets or to 425 bp for more concentrated markets (500 bp in Slovenia). The majority of O-SIIs have a systemic score below 2,000 bp and only a few of them exceed the score of 3,000 bp (see Figure C.1).

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158 Prepared by Ľuboš Šesták (ESRB Secretariat) with research assistance from Pedram Moezzi (ESRB Secretariat). This special feature is based on the analysis conducted by the ESRB's expert group on use of structural macroprudential instruments in the EU. This analysis was published in the **Final report on the use of structural macroprudential instruments in the EU** (December 2017) and was further updated with 2017 data for this special feature.

159 EBA Guidelines EBA/GL/2014/10 on the criteria to determine the conditions of application of Article 131(3) of Directive 2013/36/EU in relation to the assessment of other systemically important institutions, December 2014.

160 Estonia considers an adjusted score without one binding indicator in their methodology. Latvia revised its methodology, which should now be fully compliant with the EBA guidelines. The Maltese authorities confirm that the use of the EBA methodology would have given the same results in terms of O-SIIs identified. Slovenia applies a threshold of 500 bp. See EBA Compliance Table (Appendix 1) to the Guidelines EBA/GL/2014/10 available at: **https://www.eba.europa.eu/documents/10180/930752/EBA+GL+2014+10-Compliance+Table-Guidelines+on+Criteria+for+the+assessment+of+O-SIIS.pdf/1f62d5db-043c-4a2a-a942-ca107d6b1a34**

161 See Annex 1 of the **Final report on the use of structural macroprudential instruments in the EU** for an overview of these indicators (December 2017).

**In general, national authorities use two types of method to calibrate the O-SII buffer but with noticeable differences in the details.** The first type of method consists of directly mapping the scores from the identification methodology to the level of the O-SII buffer, assuming that the systemic score is a good proxy for the systemic risk posed by O-SIIs. Most authorities use the so-called bucketing approach[162], but the number of buckets and the allocation of O-SIIs into these buckets differ. Examples of such methods include cluster analysis (GR, IT, PT), proportional calibration (EE, LU), peer comparison (EE), or a combination of methods (BE, DE, HU, IE, SI). Also, supervisory judgement is used (e.g. in AT, BG, CY, ES, FR, NL, PL, RO, SK), while the notifications to the ESRB do not always reveal in which way it is exercised. The ECB published a methodology in 2017, which established a floor for the O-SII buffer rate, based on the bucketing approach, to provide for harmonisation at the lower end of the buffer calibration.[163]

The second type of method derives the O-SII buffer level without a direct link to the score from the identification process. Among these, the (equal) expected impact approach[164] is the most frequently used (BE, EE, HR, HU, IE, LV, LT). Section 4 of the ESRB's final report on the use of structural macroprudential instruments in the EU, and Chapter 4 of the ESRB Handbook for Operationalising macroprudential policy in the banking sector, provide a detailed overview of these calibration methods.

**As the use of these different methods results in a significant variation in the levels of the buffer for SII risk[165], the question arises whether these buffer levels sufficiently mitigate the risk posed by O-SIIs (Figure C.1).** Some divergence of the buffer levels can be explained by national specificities of banking sectors, for example an O-SII with a lower score will have a different significance in a highly concentrated banking system than in a fragmented banking system. In general, buffer rates for the majority of O-SIIs with similar O-SII scores are within a one percentage point band and O-SIIs with a higher systemic score are required to hold a higher buffer; nevertheless, there are significant outliers. The introduction of the ECB floor methodology narrowed the possible range of O-SII buffers requiring minimum buffer levels for defined buckets. The significant differences in the O-SII buffer rates pertain also to the EU cross-border groups identified in Annex 4, both in relation to their O-SII score as well as to their total assets relative to the EU's GDP (see Figure C.2).

**Despite relatively similar O-SII scores across countries, there is little consistency in corresponding buffer levels.** Some authorities use the full range of O-SII buffer rates (from 0% to 2%), while others only use part of this range or a flat rate for all O-SIIs. Some countries use the G-SII buffer as an upper benchmark for the O-SII buffers (ES, IT).[166] Others (e. g. IE, IT, PL, PT) structure the buffer rates in a way that no institution is assigned to the bucket with the highest systemic score, which provides a disincentive for banks to increase their systemic importance. Some authorities have intentionally designed their O-SII framework in this way.

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[162] The bucketing approach groups O-SIIs into different groups or "buckets" which are characterised by a similar level of systemic importance. The number of buckets, their size and corresponding buffer rates need to be set in a discretionary way by the national authorities.

[163] ECB, "Topical issue – ECB floor methodology for setting the capital buffer for an identified Other Systemically Important Institution", *Macroprudential Bulletin*, No 3, June 2017.

[164] Some countries use the score from the identification process as a proxy for the bank's systemic LGD in the equal expected impact method.

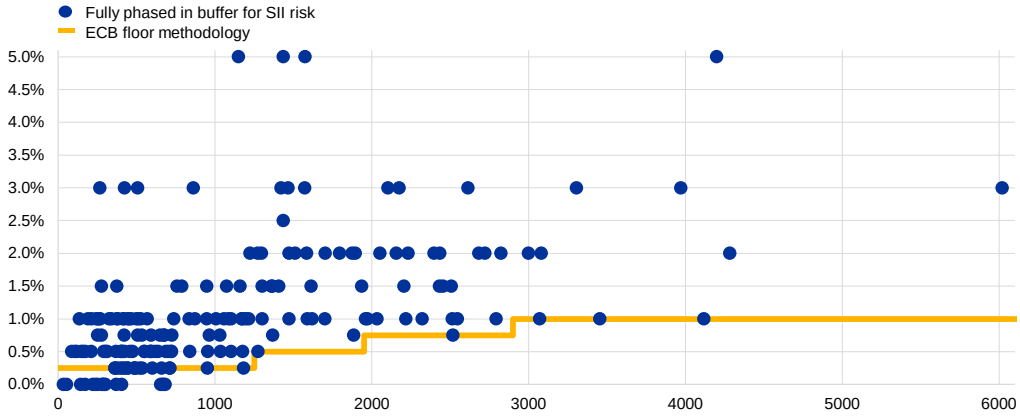
[165] The buffer for SII risk includes the O-SII buffer, the G-SII buffer and the SyRB and Pillar 2 measures only if the national designated authority publicly stated that such measures are used to target the O-SII risk. The O-SII/G-SII buffer is cumulated with the SyRB according to the CRD IV provisions.

[166] ES: Santander G-SII buffer of 1%, IT: UniCredit G-SII buffer of 1%.

Figure C.1

**Relationship between the O-SII score and the fully phased in buffer rate for SII risk**

(percentages, basis points)



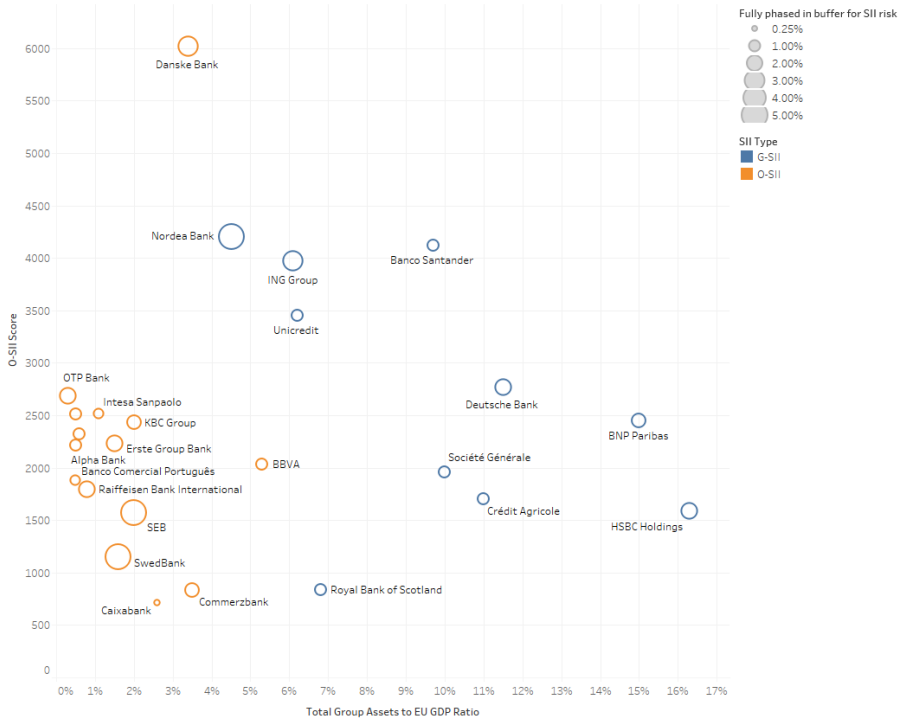

Source: ESRB.

Notes: Data are based on notifications received in 2017. The buffer for SII risk includes the O-SII buffer, the G-SII buffer, the SyRB and Pillar 2 measures only if the national designated authority publicly stated that such measures are used to target the O-SII risk. The O-SII/G-SII buffer is cumulated with the SyRB according to the CRD IV provisions. Those banks with a zero buffer are non-euro area banks.

Figure C.2

**Relationship between the significance of O-SII groups and their fully phased in buffer rate for SII risk**

(percentages, basis points)




Sources: ECB, ESRB and SNL data and ESRB calculations.

Notes: Data are based on notifications received in 2017 and total assets and GDP figures for 2016. The size of the bubbles represents the level of the fully phased in buffer for the SII risk. The buffer for SII risk includes the O-SII buffer, the G-SII buffer and the SyRB and Pillar 2 measures only if the national designated authority publicly stated that such measures are used to target the O-SII risk. The O-SII/G-SII buffer is cumulated with the SyRB according to the CRD IV provisions.

Several Member States (e.g. ES, GR, IT, PT) justify their lower buffer levels by the intention to avoid adverse effects on credit supply and the economic recovery and to limit possible disruptions to the financial system or the real economy, or are of the view that the introduction of the recovery and resolution framework of the EU addresses the same risks as the O-SII buffer. Several other countries (especially northern, central, eastern and south-eastern European countries) apply relatively higher buffers and a few others use other macroprudential tools in addition to or instead of the O-SII buffer to achieve the desired buffer levels targeting SII risks.

## C.2 Restrictions posed by the O-SII buffer caps

**The CRD IV[167] restricts the level of the O-SII buffer that can be applied to O-SIIs, which may therefore not be sufficient to mitigate the targeted systemic risk.** The O-SII buffer rate cannot exceed 2%. Moreover, for subsidiaries of O-SIIs or G-SIIs that are EU parent institutions the buffer rate cannot exceed the higher of 1% or the buffer rate applicable at the group level. Analyses conducted by some national authorities point to the need for O-SII buffers in excess of these caps (for example in Germany[168] or the Czech Republic[169]).

**As a result, O-SII buffers can be set at lower levels than G-SII buffers despite the fact that O-SIIs may have a more concentrated position in national markets.** At present, the highest G-SII buffer rate set is 2.5%. The G-SII framework also has an empty bucket of 3.5% and a new, higher empty bucket would be added if any G-SII moved into the current highest bucket. [170] As O-SIIs have, in general, a greater share in their domestic market than G-SIIs in the global banking market (Figure C.3 and Figure C.4), their impact on the domestic economy could, in relative terms, be higher and may justify a higher O-SII buffer.

[167] Article 131 (5) and Article 131 (8) of the CRD.

[168] Deutsche Bundesbank, BaFin (2016), *Capital buffers for other systemically important institutions (O-SIIs)*, abridged version.

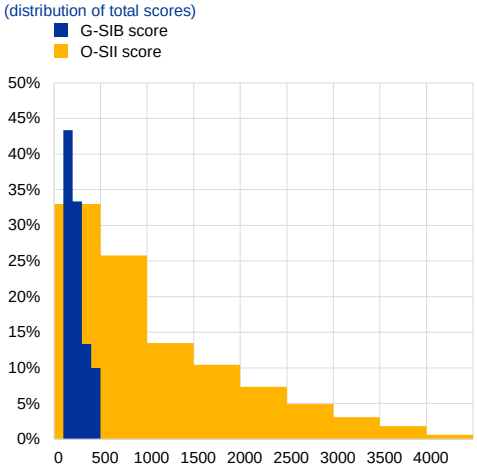
[169] Skorepa, M. and Seidler, J. (2013), "An additional capital requirement based on the domestic systemic importance of a bank", *International Journal of Economic Sciences*, Vol. II, No 3, pp. 131-142.

[170] The new buckets would be added in increments of 1 pp, i.e. 4.5%, 5.5%, etc. See Article 47 of Global systemically important banks: updated assessment methodology and the higher loss absorbency requirement. **https://www.bis.org/publ/bcbs255.pdf**

Figure C.3

**Comparison of O-SII and G-SII total scores**

(distribution of total scores)

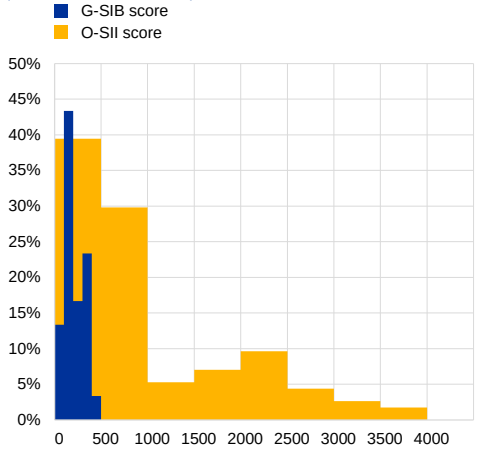



Sources: Loudis, B. and Allahrakha, M. (2016)[171] and ESRB calculations.
Note: O-SII scores refer to 2016 and G-SII scores to 2015 data.

Figure C.4

**Comparison of O-SII and G-SII size scores**

(distribution of size scores)




Sources: Loudis, B. and Allahrakha, M. (2016)[172] and ESRB calculations.
Note: O-SII scores refer to 2016 and G-SII scores to 2015 data.

**While the cap's aim is to prevent ring-fencing of capital at the subsidiary level and to facilitate financial integration in the EU, it can potentially lead to a level playing field distortion or compromise financial stability in host countries.** Banks in a jurisdiction should be subject to a consistent, coherent and non-discriminatory treatment regardless of their ownership. As a rule, two banks of similar systemic importance should therefore be subject to a similar O-SII buffer. However, this might not be possible if the O-SII buffer for one of them is capped at a lower level than deemed necessary by the host authority. As a result, either the risk would be insufficiently addressed (which affects financial stability) or the level playing field principle would be compromised. The cap, if applied to at least one subsidiary, thus indirectly affects all banks in the host jurisdiction including domestically owned banks and may ultimately have a negative impact on financial stability in host countries.

Facing the financial stability risk, host authorities might use other instruments to ensure the desired bank capitalisation, which might not be optimal. However, the additional cap should limit the inefficient allocation of capital within banking groups and prevent undesired competition between EU home and host supervisors with regard to the allocation of capital. Furthermore, it is perceived that different buffer levels across the EU could constitute an obstacle to cross-border bank acquisitions and could inhibit the development of pan-European banking groups.

There are 23 Member States where there is an O-SII subsidiary whose parent is an O-SII or a G-SII located in another Member State. In the majority of these countries, at least some subsidiaries are constrained by the buffer set at group level (Figure C.5). For some of them, the O-SII buffer set for the parent group does not pose any restrictions. However, in a number of cases the parent institutions are based in jurisdictions where the buffers are set at such levels that this may lead to a distortion of the host O-SII buffer framework.

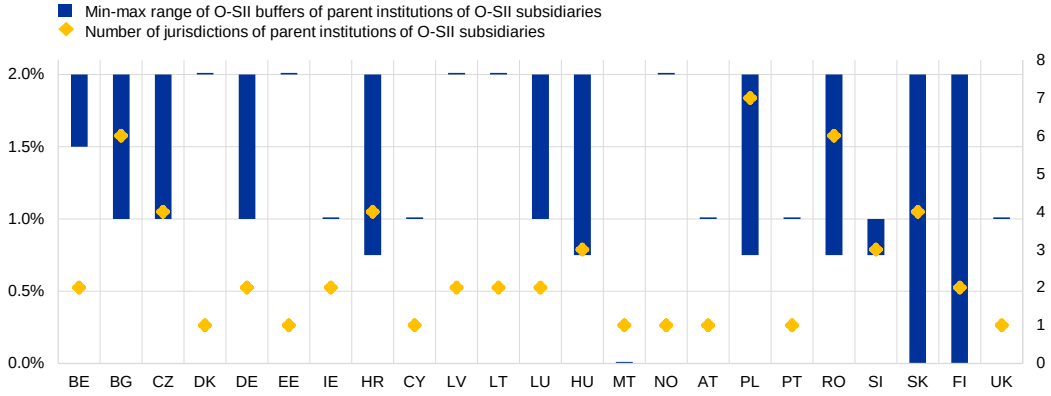
171 Loudis, B. and Allahrakha, M. (2016), "Systemic Importance Data Shed Light on Banking Risks", *Brief Series*, No 16-03, OFR, April.

172 ibid.

Figure C.5

**O-SII/G-SII buffer rates of EU parent institutions of O-SII subsidiaries**

(percentages, numbers)




Source: ESRB.

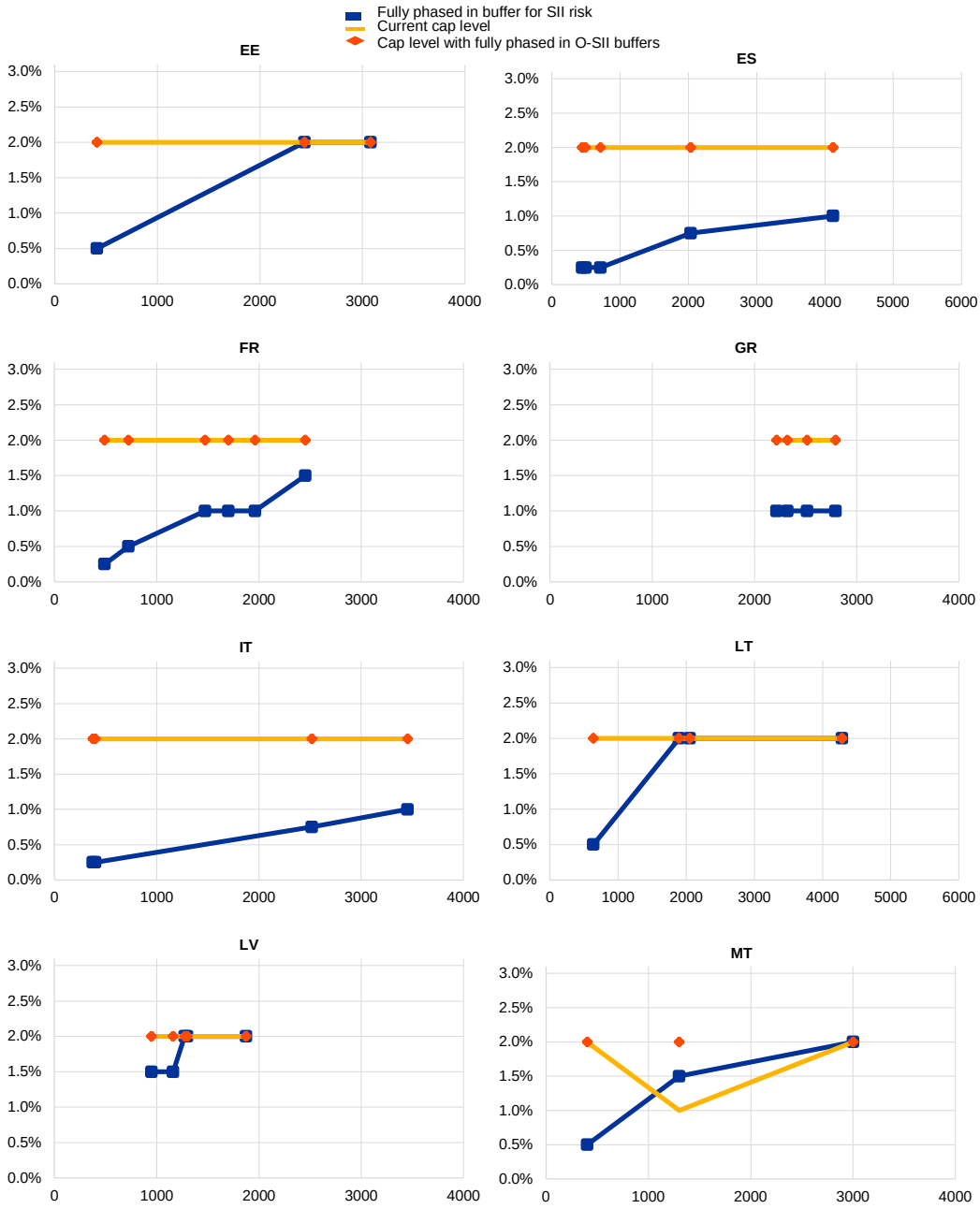
Notes: The O-SII buffer range is displayed on the left-hand axis and shows the range of the higher of O-SII/G-SII buffer rates for foreign EU parent institutions of subsidiaries located in the respective country. The number of jurisdictions in which these EU parent institutions are headquartered is displayed on the right-hand axis. Data are based on notifications received in 2016 and buffer rates applicable in 2017.

**For several countries, only the general O-SII buffer cap (2%) applies at present (Figure C.6); however, this level is deemed insufficient by some countries.** In France, Greece, Italy and Spain no subsidiary of a foreign bank has been identified as an O-SII, while several of their O-SIIs are themselves parent institutions of O-SIIs located in other Member States. France uses a buffer range of up to 1.5% for its O-SIIs, while the other three countries apply buffer rates only up to 1%. In the three Baltic countries, all subsidiaries are subject to the cap of 2%, as their parent banks have their O-SII buffers set at this level; the cap for subsidiaries thus does not bring any additional limitation to the O-SII framework of these countries. In Malta, the current level of O-SII/G-SII buffers of the parent could have posed restrictions on the O-SII buffer for subsidiaries; however, this restriction will cease to exist once the buffers are fully phased in. The seven aforementioned countries do not apply any other instruments to address the SII risk. Similarly, all O-SIIs in Denmark, the Netherlands and Sweden are only subject to the general O-SII buffer cap. However, authorities in these countries apply other tools such as the SyRB or Pillar 2 to set capital buffers for the SII risk at 3% (Denmark, the Netherlands) and 5% (Sweden) (Figure C.7).

Figure C.6

**Relationship between the O-SII score and the fully phased in buffer rate for SII risks for countries where only the general O-SII buffer cap applies**

(percentages, numbers)



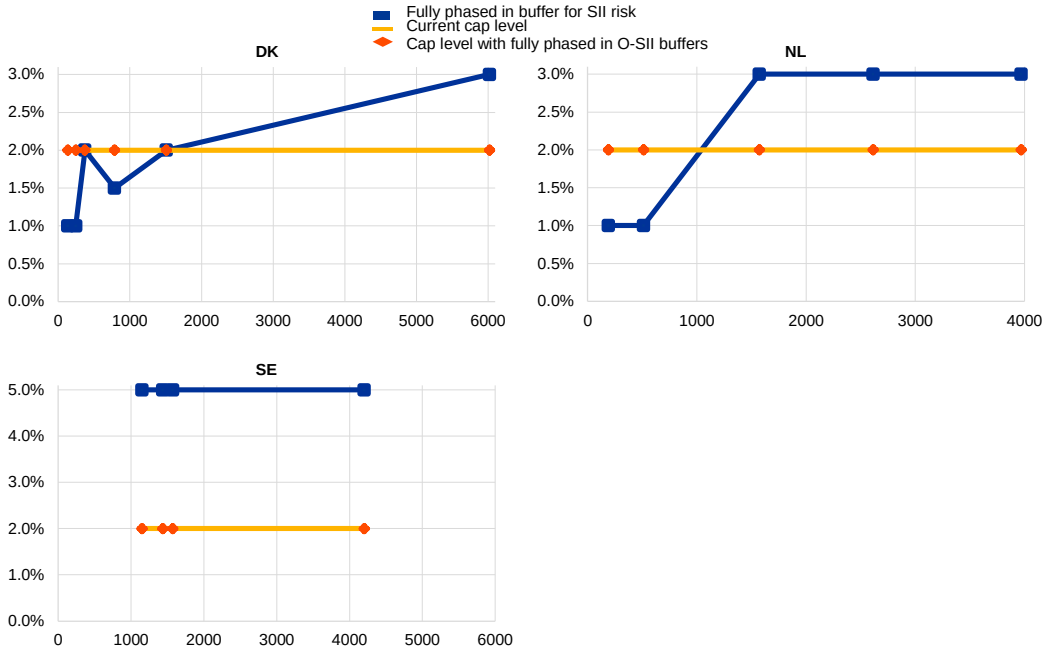

Source: ESRB.

Notes: Data are based on notifications received in 2017. Fully phased in buffer for SII risk may potentially include the G-SII buffer, the O-SII buffer, the SyRB and the Pillar 2 requirement in the country concerned (blue). Cap level refers: (i) either to the 2% O-SII buffer cap for EU parent institutions in the country concerned; (ii) or to the O-SII buffer cap for subsidiaries in the country concerned and whose parent institution is domiciled in another Member State, whichever is more binding; the cap is shown at current levels for 2017 (yellow) or at levels after full phase-in (red).

Figure C.7

**Relationship between the O-SII score and the fully phased in buffer rate for SII risks for countries restricted by the general O-SII buffer cap**

(percentages, numbers)




Source: ESRB.

Notes: Data are based on notifications received in 2017. Fully phased in buffer for SII risk may potentially include the G-SII buffer, the O-SII buffer, the SyRB and the Pillar 2 requirement in the country concerned (blue). Cap level refers: (i) either to the 2% O-SII buffer cap for EU parent institutions in the country concerned; (ii) or to the O-SII buffer cap for subsidiaries in the country concerned and whose parent institution is domiciled in another Member State, whichever is more binding; the cap is shown at current levels for 2017 (yellow) or at levels after full phase-in (red).

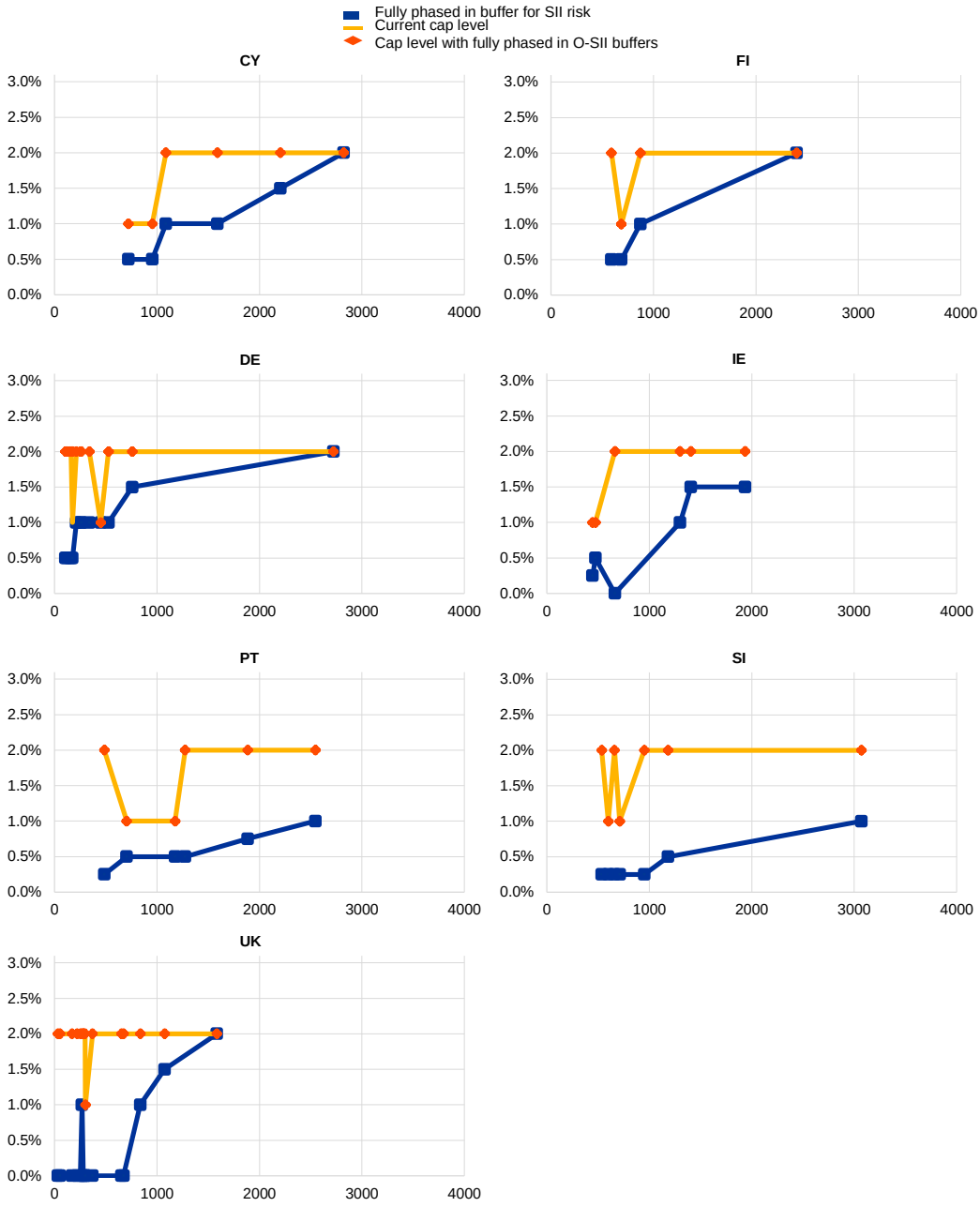
**In several other countries, the O-SII buffer is constrained at 1% only for certain subsidiaries with lower O-SII scores and does not seem to distort the framework at present (Figure C.8).** For Cyprus and Ireland, the cap for subsidiaries is restricting the potential range of O-SII buffers only for the lowest-ranking O-SIIs. For Finland, Germany, Portugal, Slovenia and the United Kingdom, the subsidiary cap is also in effect for lower-ranking O-SIIs, though not for the lowest-ranking one (although the cap is in effect for the fourth-largest O-SII in Germany). Nevertheless, in all these countries either the desired levels of the O-SII buffer are not restricted by the currently applicable caps or these countries may not want to use other instruments to address the systemic risks not completely covered by the O-SII-buffer.

**For several Member States, the subsidiary cap restricts the potential range of the O-SII buffer applicable to the higher-ranking O-SIIs and thus the buffer might be insufficient to cover the O-SII risk (Figure C.9).** While in Austria, Hungary and Malta the subsidiary cap is not in effect for the highest-ranking O-SII, for other O-SIIs, it constitutes a binding constraint. For Belgium, Bulgaria, Croatia, the Czech Republic, Luxembourg, Romania and Slovakia, the O-SII buffer rate for the highest-ranking O-SII is currently capped at 1%, though the situation will be somewhat alleviated in Belgium, the Czech Republic and Romania after the buffers for the parent institution are fully phased in. Some of these countries (BE, BG, HU, RO) set the fully loaded buffer for SII risk at the maximum possible rate under the cap. In Luxembourg, the current level of the O-SII buffer is in line with the current level of the cap; however, the fully loaded O-SII buffer rate exceeds the fully loaded O-SII buffer cap, thus potentially creating inconsistencies in the future. Finally, the Czech Republic, Croatia and Slovakia use the SyRB to reach their target buffer levels for SII risks in excess of the O-SII cap.

Figure C.8

**Relationship between the O-SII score and the fully phased in buffer rate for SII risks for countries where the cap is restricting only for lower-rank O-SIIs**

(percentages, numbers)



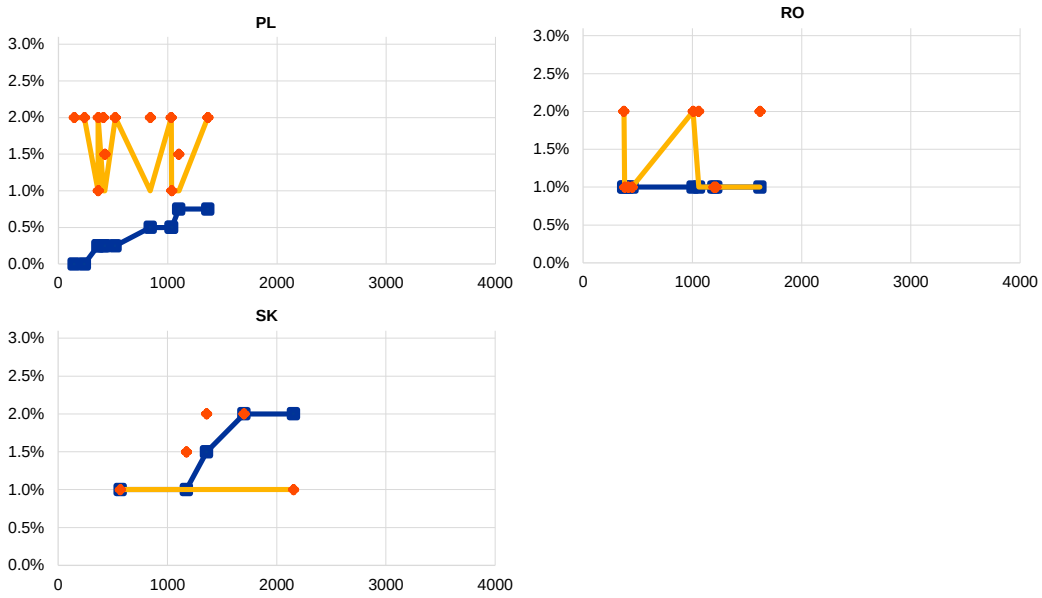

Source: ESRB.

Notes: Data are based on notifications received in 2017. Fully phased in buffer for SII risk may potentially include the G-SII buffer, the O-SII buffer, the SyRB and the Pillar 2 requirement in the country concerned (blue). Cap level refers: (i) either to the 2% O-SII buffer cap for EU parent institutions in the country concerned; (ii) or to the O-SII buffer cap for subsidiaries in the country concerned and whose parent institution is domiciled in another Member State, whichever is more binding; the cap is shown at current levels for 2017 (yellow) or at levels after full phase-in (red).

Figure C.9

**Relationship between the O-SII score and the fully phased in buffer rate for SII risks for countries where the capped O-SII buffer might be insufficient to cover the systemic risk**

(percentages, numbers)




Source: ESRB.
Notes: Data are based on notifications received in 2017. Fully phased in buffer for SII risk may potentially include the G-SII buffer, the O-SII buffer, the SyRB and the Pillar 2 requirement in the country concerned (blue). Cap level refers: (i) either to the 2% O-SII buffer cap for EU parent institutions in the country concerned; (ii) or to the O-SII buffer cap for subsidiaries in the country concerned and whose parent institution is domiciled in another Member State, whichever is more binding; the cap is shown at current levels for 2017 (yellow) or at levels after full phase-in (red).

## C.3 Conclusions

**The ability to exercise supervisory judgement and the lack of detailed guidance on O-SII buffer calibration lead to large differences in national approaches.** The ESRB's final report on the use of structural macroprudential instruments in the EU identified several potential methods for the O-SII buffer calibration. In principle, each methodology has some discretionary components and parameters that are set using supervisory judgement and none of them have been identified as superior. However, it needs to be ensured that the buffers for O-SIIs are commensurate with the systemic risk they pose. The actual differences in the buffer levels and the use of alternative instruments (SyRB, Pillar 2) instead, or on top of, the O-SII buffer suggest that this is not the case. It is also important to avoid an unequal treatment of O-SIIs across the EU which could jeopardise financial stability.

**The differences between buffer rates for O-SIIs across Member States are likely to continue in the near future.** The varying O-SII buffer rates are partially due to the different approaches followed by Member States in setting the rates as well as the restrictions posed by the O-SII buffer caps. Some countries use other tools to overcome these restrictions; therefore changes in the design of the caps would allow the use of this dedicated tool to address the risk of SIIs. As a consequence, the ESRB, in its Opinion to the European Commission on structural macroprudential buffers, proposed fostering coordination in the calibration of O-SII buffers and increasing the O-SII buffer cap to 3% with the possibility for designated authorities to impose buffers higher than 3%, subject to approval from the European Commission. These general rules would also apply in the case of subsidiaries of EU parent institutions. Additionally for subsidiaries of EU parent institutions, the ESRB further proposed increasing their O-SII buffer cap so that their O-SII buffer would not exceed the fully phased in O-SII or G-SII buffer applicable to the group at consolidated level by more than 2 pp.

# Annex 1 Material third countries

Table 1.1

**Exposures of the EU banking sector vis-à-vis third countries**

***(percentage of respective total exposures of the EU banking sector)***

| Third Country | Original exposure | | | Risk-weighted exposures | | | Exposures in default | | | Materiality |
|---|---|---|---|---|---|---|---|---|---|---|
| | Q4 2016 | Q3 2016 | Last 8Q | Q4 2016 | Q3 2016 | Last 8Q | Q4 2016 | Q3 2016 | Last 8Q | |
| **United States** | 8.29 | 8.32 | 8.10 | 8.01 | 7.81 | 7.96 | 2.39 | 2.64 | 2.33 | Confirmed |
| **Hong Kong** | 2.51 | 2.33 | 2.36 | 1.71 | 1.58 | 1.62 | 0.09 | 0.11 | 0.10 | Confirmed |
| **Singapore** | 1.02 | 1.02 | 1.03 | 0.65 | 0.61 | 0.66 | 0.20 | 0.20 | 0.12 | Newly identified |
| **Switzerland** | 1.01 | 0.97 | 0.95 | 0.77 | 0.77 | 0.73 | 0.40 | 0.33 | 0.30 | Newly identified* |
| **China** | 0.84 | 0.79 | 1.40 | 0.97 | 0.90 | 2.11 | 0.13 | 0.15 | 0.13 | Not deleted** |
| **Brazil** | 0.78 | 0.74 | 0.75 | 1.19 | 1.09 | 1.10 | 0.82 | 0.75 | 0.52 | Confirmed |
| **Mexico** | 0.74 | 0.67 | 0.59 | 1.01 | 0.98 | 0.79 | 0.18 | 0.23 | 0.14 | Not identified |
| **Cayman Islands** | 0.64 | 1.21 | 1.17 | 0.98 | 0.94 | 0.89 | 0.19 | 0.17 | 0.19 | Not identified |
| **Turkey** | 0.59 | 0.80 | 0.89 | 0.99 | 1.33 | 1.37 | 0.38 | 0.45 | 0.32 | Confirmed |
| **Russia** | 0.38 | 0.39 | 0.48 | 0.55 | 0.59 | 0.71 | 0.45 | 0.50 | 0.54 | Not deleted*** |

Sources: EBA, ESRB calculations.

Notes: The table shows the original credit exposures of the EU banking sector vis-à-vis the real economy of the third countries to which the EU banking sector has the largest exposures. Third countries are ranked according to original credit exposures to the real economy in Q4 2016. Numbers above the 1% threshold established by Decision ESRB/2015/3 are highlighted in orange. *Switzerland did not fulfil the criteria for being identified, but was added to the list of material third countries using discretion because of the large overlap in identification among Member States. **China did not fulfil the criteria for being deleted from the list. ***Russia fulfilled the criteria for being deleted from the list, but the criteria are not to be used in the 2017 round of revision (Art. 5(2) of Decision ESRB/2015/3).

Table 1.2

## Methodologies used by Member States for identifying material third countries

| Member State | ESRB methodology | | | Latest data | Comments |
|---|---|---|---|---|---|
| | Calculation | Threshold | Data | | |
| AT | ● | ● | ● | Q4 2016 | Statistical approach overlaid with expert judgement |
| BE | ● | ● | ● | Q4 2016 | Statistical approach overlaid with expert judgement |
| BG | ● | ● | ● | Q1 2017 | Additional inclusion of intragroup exposures |
| CY | ● | ● | ● | Q4 2016 | |
| CZ | ● | ● | ● | Q4 2016 | |
| DE | ● | ● | ● | Q4 2016 | Combination with external position data using a 3% threshold |
| DK | ● | ● | ● | Q4 2016 | Use of 2% threshold; statistical approach overlaid with expert judgement |
| EE | ● | ● | ● | Q4 2016 | |
| ES | ● | ● | ● | Q4 2016 | Use of additional COREP data items providing a larger sample of Spanish banks |
| FI | ● | ● | ● | Q1 2017 | |
| FR | ● | ● | ● | Q4 2016 | Statistical approach overlaid with expert judgement |
| GR | ● | ● | ● | Q4 2016 | Combination with own proxies to ESRB metrics |
| HR | ● | ● | ● | Q4 2016 | Missing risk-weighted exposures; combination with analysis of unconsolidated risk-weighted exposures |
| HU | ● | ● | ● | Q1 2017 | Use of additional COREP templates C 09.03 until Q3 2016 and C 09.04 for the more recent quarters providing a larger sample of Hungarian banks; alternative proxy used to ESRB metrics; statistical approach overlaid with expert judgement |
| IE | ● | ● | ● | Q4 2016 | Materiality if two metrics exceed threshold and based on most recent quarter and average over preceding four quarters |
| IT | ● | ● | ● | Q4 2016 | |
| LT | ● | ● | ● | Q4 2016 | Statistical approach overlaid with expert judgement |
| LU | ● | ● | ● | Q4 2016 | |
| LV | ● | ● | ● | Q1 2017 | Use of 2% threshold; decision not to use defaulted exposures |
| MT | ● | ● | ● | Q4 2016 | Use of only 10 quarters for deletion purposes owing to data unavailability for all third countries |
| NL | ● | ● | ● | Q4 2016 | Statistical approach overlaid with expert judgement |
| PL | ● | ● | ● | Q4 2016 | |
| PT | ● | ● | ● | Q4 2016 | |
| RO | ● | ● | ● | Q4 2016 | Additional use of monetary statistics and further indicators |
| SE | ● | ● | ● | Q1 2017 | Statistical approach overlaid with expert judgement |
| SI | ● | ● | ● | Q4 2016 | Use of 5% threshold; decision not to use defaulted exposures |
| SK | ● | ● | ● | Q1 2017 | Decision not to use defaulted exposures |
| UK | ● | ● | ● | Q4 2016 | To account for loss-absorbing capacity, materiality is based on size of UK banks' private real economy foreign exposures relative to size of UK banks' tangible equity (threshold of 10%) |
| ECB | ● | ● | ● | Q2 2016 | Additional use of monetary statistics, concentration and diversification proxies, and further indicators. Thresholds are still under construction |
| NO | ● | ● | ● | Q4 2016 | |

Source: ESRB.
Notes: "ESRB methodology" refers to the methodology laid down in Decision ESRB/2015/3 on the assessment of materiality of third countries for the EU banking system in relation to the recognition and setting of countercyclical buffer rates, and binds the ESRB when identifying material third countries for the EU. Member States are not obliged to apply the ESRB methodology when identifying material third countries for themselves. "Calculation" refers to the use of moving averages and the last two quarters of the three risk metrics as laid down in Articles 4(1) and 3(2) of Decision ESRB/2015/3. "Threshold" refers to the 1% threshold for any of the three metrics as laid down in Article 4(1) of Decision ESRB/2015/3. "Data" refers to the use of the COREP data series as laid down in Article 3(2) of Decision ESRB/2015/3. Green dots indicate that the methodology used is equivalent to the methodology described in Decision ESRB/2015/3. Orange and grey dots indicate that differing metrics, criteria or thresholds have been used which are explained in the column "Comments". Orange dots indicate that the methodology is based on the one of the ESRB, while grey dots indicate that a different methodology is used.

# Annex 2 Active residential real estate instruments in Europe

Table 2.1

**Collateral stretch instruments**

| Member State | Limit | Scope | Basis for measure |
|---|---|---|---|
| Austria | LTV: 60% for bonds covered by mortgages; 80% for mortgage loans granted by building societies; 60% for mortgages included in the coverage funds in the insurance sector | All credit institutions subject to those special laws and insurers | Binding regulation |
| Cyprus | LTV: 80% in cases where the credit facility is granted for financing the primary permanent residence of the borrower; 70% for all other property financing cases | Credit institutions authorised and operating in Cyprus | Binding regulation |
| Czech Republic | LTV: From 100% (2015) to 90% (2017); the share of loans with an LTV of 80%-90% is limited to 15% per quarter (2017); 60% for buy-to-let financing with high risk levels | All credit providers | Recommendation |
| Denmark | LTV: 95%; for mortgage credit institutions, the share of interest only lending where the LTV exceeds 75% of the lending limit shall not exceed 10% of the total loan volume per quarter | Banks and mortgage credit institutions | Recommendation |
| Estonia | LTV: 85%; 90% in the case of a KredEx guarantee; up to 15% of the amount of new housing loans in a quarter is allowed to breach the limit | All credit institutions operating in Estonia, including the branches of foreign credit institutions | Binding regulation |
| Finland | LTV: 90%; 95% for first-time buyers (a wide range of other collateral is taken into account in calculating the LTV in addition to the value of the purchased dwelling) | N/A | Binding regulation |
| Hungary | LTV: between 35% and 80% (depending on the currency denomination of the loan) | All lenders (both bank and non-bank, including branches) | Binding regulation |
| Iceland | LTV: 85% for second-time and subsequent buyers; 90% for first-time buyers; 70% for buy-to-let housing; 75% for preferential risk weighting | All regulated financial services providers in Iceland | Binding regulation |
| Ireland | LTV: 90% for first-time buyers; 80% for second-time and subsequent buyers; 70% for buy-to-let borrowers | N/A | Binding regulation |
| Latvia | LTV: 90%; 95% for loans covered by a state guarantee under the Law on Assistance in Resolution of Dwelling Issues (since July 2014) | All lenders (both bank and non-bank, including branches) | Binding regulation |
| Lithuania | LTV: 85%; <85% for succeeding concurrent mortgages (when all previous mortgages are fully serviced, LTV is allowed to rise back up to 85%) | All housing credit providers as long as credit is provided to consumers | Binding regulation |
| Luxembourg | LTV: if >80%, risk weight of 75% has to be applied to the exceeding part of the mortgage loan | Institutions using the standardised approach for credit risk | Binding regulation |
| Malta | LTV: 70% when applying a risk weight of 35% | Credit institutions licensed in Malta | Binding regulation |
| Netherlands | LTV: from 106% (2012) to 100% (2018)[173] | N/A | Binding regulation |
| Norway | LTV: 85%; 60% for home equity lines of credit; 60% for secondary homes in Oslo. Amortisation requirements if LTV>60%. Per quarter, 10% of the mortgage volume is permitted to exceed one or more of the stress test, LTI, LTV and amortisation requirements; this limit is 8% for mortgages in Oslo | Mortgage lenders | Binding regulation |
| Poland | LTV: 80% as of 2017, having fallen from 90% (2015); potential of attaining 90% if this additional part (above 80%) is insured/collateralised with funds in bank accounts | N/A | Recommendation |
| Romania | LTV: between 60% and 85% (depending on the currency denomination of the loan) | N/A | Binding regulation |
| Slovakia | LTV: 100%; the share of new loans with an LTV>90% cannot exceed 10% and the share of new loans with an LTV>80% cannot exceed 40% | All regulated financial services providers in Slovakia | Binding regulation |
| Slovenia | LTV: 80% | Banks and savings banks, | Recommendation |

[173] The Dutch Financial Stability Committee has recommended continuing the gradual reduction beyond 2018 to an LTV limit of 90%.

| | | | |
|---|---|---|---|
| | | including branches of foreign banks | |
| Sweden | LTV: 85%; amortisation requirements if LTV>50% | All credit institutions operating in Sweden, including the branches of foreign credit institutions | Binding regulation |
| United Kingdom | Requirement for a credible repayment strategy for borrowers receiving an interest-only mortgage loan | All new mortgages | Binding regulation |

Source: ESRB.
Notes: Table refers to instruments that were active in 2017 but might have been implemented earlier. Amortisation requirements have been included both under the income stretch and the collateral stretch categories.

Table 2.2

**Household/income stretch instruments**

| Member State | Limit | Scope | Basis for measure |
|---|---|---|---|
| Cyprus | DSTI: DSTI limit of 80% of the borrower's net disposable income should not be exceeded (65% for foreign currency loans) | Credit institutions authorised and operating in Cyprus | Binding regulation |
| Denmark | DTI: if DTI>4, households should have positive net wealth in the event of a 10% decline in the value of the property (25% decline if DTI>5). Applies to areas with significant price increases (currently the cities of Copenhagen and Århus). Further, if DTI>4 and LTV > 60%, households cannot obtain variable-rate loans with an interest rate fixed for less than five years and deferred amortisation loans with an interest rate fixed for less than 30 years | Banks and mortgage credit institutions | Recommendation |
| Estonia | DSTI: 50%; up to 15% of the amount of new housing loans in a quarter is allowed to breach the limit; a borrower's debt servicing ability is tested with a 6% interest rate | All credit institutions operating in Estonia, including the branches of foreign credit institutions | Binding regulation |
| Finland | Borrower stress test to test his/her ability to service the debt if the mortgage rate were 6% and the maximum maturity of the loan 25 years | N/A | Recommendation |
| Hungary | PTI: 10%-60%; depending on currency denomination and net income of the borrower; *de minimis* of HUF300,000 | All lenders (both bank and non-bank, including branches) | Binding regulation |
| Ireland | LTI: new housing loans with LTI >3.5 should be $\leq$ 20% of aggregate value of new loans | All regulated financial services providers in Ireland | Recommendation |
| Lithuania | DSTI: 40% of net income; stressed DSTI of 50% under the scenario of an interest rate of 5%; up to 5% of the total value of new housing loans during a calendar year is allowed to breach the DSTI limit of 40% (but capped at 60% limit) | All housing credit providers as long as credit is provided to consumers | Binding regulation |
| Netherlands | DSTI: limit depending on income and interest rates | N/A | Binding regulation |
| | LTI: limit depending on income and interest rates | N/A | Binding regulation |
| Norway | Amortisation: 2.5% rate for residential mortgage loans with LTV>60%. 10% of the mortgage volume is permitted not to meet one or more of the stress test, LTI, LTV and amortisation requirements; the limit is 8% for mortgages in Oslo | Mortgage lenders | Binding regulation |
| | LTI: total debt may not exceed five times gross annual income. 10% of the mortgage volume per quarter is allowed not to meet one or more of the stress test, LTI, LTV and amortisation requirements; the limit is 8% for mortgages in Oslo | Mortgage lenders | Binding regulation |
| Poland | DSTI: bank-internal limits for all loans to households; banks should pay particular attention to loans with DSTI>50% | N/A | Recommendation |
| Romania | DSTI: maximum level for consumer loans depending on foreign currency, interest rate and income risk; debt includes mortgage loans | Bank and non-bank financial institutions | Binding regulation |
| Slovakia | DSTI: limit of 90%[174] for the borrower's disposable income; in the case of floating-rate loans, an interest rate increase of two percentage points is assumed | All regulated financial services providers in Slovakia | Binding regulation |
| Slovenia | DSTI limit of 50% for monthly income up to €1,700 and 67% limit for monthly income above this; the limitations on the attachment of a debtor's financial assets set out in the Enforcement and Securing of Claims Act and the Tax Procedure Act, i.e. earnings that are exempt from attachment and limitations on the attachment of a debtor's financial earnings should be *mutatis mutandis* taken into account in the loan approval process | Banks and savings banks, including branches of foreign banks | Recommendation |
| Sweden | Amortisation: annual repayments of at least 1% on loans with 50%<LTV≤70% and 2% if LTV>70%. Stricter amortisation requirement: additional annual repayments of at least 1% on loans with LTI > 4.5 in excess of the previous amortisation requirement (which is linked to the mortgage's LTV). | All credit institutions operating in Sweden, including the branches of foreign credit institutions | Binding regulation |

[174] 95% as of 1 March 2017; 90% as of 1 July 2017; 85% as of 1 January 2018; and 80% as of 1 July 2018.

| | | | |
|---|---|---|---|
| United Kingdom | LTI: new residential mortgage loans with LTI≥4.5 times income should be <15% of aggregate volume of new loans; *de minimis* exception; recommendation by the FPC on interest rate stress in affordability assessment and measures by the PRA on underwriting standards for buy-to-let lending | Mortgage lenders | Binding regulation |

Source: ESRB.
Notes: Table refers to instruments that were active in 2017 but might have been implemented earlier. Amortisation requirements have been included both under the income stretch and the collateral stretch categories.

Table 2.3

**Lender stretch instruments**

| Member State | Limit | Scope | Basis for measure |
|---|---|---|---|
| Belgium | Risk weights: 5 percentage points add-on to the risk weights on retail exposures secured by residential immovable property in Belgium | Banks using the IRB approach | Binding regulation prior to 28 May 2017; a non-binding recommendation thereafter |
| Denmark | Maturity: maximum of 30 years | Banks and mortgage credit institutions | Binding regulation |
| Estonia | Maturity: maximum of 30 years for housing loans; up to 15% of the amount of new housing loans in a quarter is allowed to breach the limit | All credit institutions operating in Estonia, including the branches of foreign credit institutions | Binding regulation |
| Finland | Risk weights: minimum level of 15% for the average risk weight on housing loans | Credit institutions using the internal ratings-based approach | Binding regulation |
| Ireland | Stress test: lenders must assess whether borrowers can still afford their mortgage loans on the basis of a minimum 2% interest rate increase above the offered rate | Financial services providers authorised in Ireland or another EU or EEA Member State | Binding regulation |
| | Risk weights: LTV<75% for preferential risk weighting | All banks in Ireland | Binding regulation |
| Lithuania | Maturity: maximum of 30 years for new housing loans | All housing credit providers as long as credit is provided to consumers | Binding regulation |
| Luxembourg | Risk weights: 75% for the part of the mortgage loan exceeding 80% of the value of the real estate object | Institutions using the standardised approach for credit risk | Binding regulation |
| | Risk weights: average minimum risk weight of 15% for retail residential mortgage loans | Institutions using the IRB approach for credit risk | Recommendation |
| | Stress test: stricter stress test for mortgage books and requiring banks to have appropriate internal governance and policies | Institutions using the IRB approach for credit risk | Binding regulation |
| Malta | Risk weights: LTV<70% for exposures secured by mortgages on residential property when applying the 35% risk weight | Credit institutions licensed in Malta | Binding regulation |
| Norway | Risk weights: tighter requirements for residential mortgage lending models | Mortgage lenders | Binding regulation |
| | Stress test: an interest rate stress test / sensitivity test is conducted when assessing the borrower's repayment capacity. 10% of the mortgage volume is permitted not to meet one or more of the stress test, LTI, LTV and amortisation requirements; the limit is 8% for mortgages in Oslo | Mortgage lenders | Binding regulation |
| Poland | Maturity: maximum of 35 years; banks should assess creditworthiness assuming maturity of up to 25 years | Banks | Recommendation |
| | Risk weights: 150% for exposures fully secured by mortgages on residential real estate where the principal or interest instalments depend on changes in the exchange rate of one or more foreign currencies that differ to the borrower's income currency | | Recommendation |
| Romania | Stress test: accounting for foreign currency depreciation and interest rate shocks defined for consumer loans | Bank and non-bank financial institutions | Binding regulation |
| Slovakia | Maturity: maximum of 30 years; 10% of new loans may exceed this limit | All regulated financial services providers in Slovakia | Binding regulation |
| Slovenia | Risk weights: 35% for exposures secured by mortgages on residential property if LTV ≤ 60% | Banks and savings banks, including branches of foreign banks from EEA | Binding regulation |
| Sweden | Risk weights: minimum level of 25% | All credit institutions operating in Sweden, including the branches of foreign credit institutions | Binding regulation (Pillar 2) |
| United Kingdom | Stress testing including annual commercial property market downturn scenario; possibly followed up by management actions and Pillar 2 measures | Seven major UK banks and building societies | Binding regulation |

Source: ESRB.
Notes: Table refers to instruments that were active in 2017 but might have been implemented earlier.

# Annex 3 Active commercial real estate instruments in Europe

Table 3.1

**All instruments**

| Member State | Limit | Scope | Basis for measure |
|---|---|---|---|
| Croatia | Risk weights: 100% for exposures secured by mortgages on commercial immovable property, up from 50% | | Binding regulation |
| Cyprus | LTV: 70% | Credit institutions authorised and operating in Cyprus | Binding regulation |
| Hungary | Other: the formation of a dedicated asset management company to purchase distressed commercial real estate portfolios from financial institutions[175] | All credit institutions operating in Hungary | Binding regulation |
| Ireland | Risk weight: minimum of 100% for exposures secured by mortgages on commercial immovable property, up from 50% | | Binding regulation |
| Lithuania | DSTI: 40% of net income; stressed DSTI of 50% under the scenario of an interest rate of 5%; up to 5% of the total value of new housing loans during a calendar year is allowed to breach the DSTI limit of 40% (but capped at 60% limit) | All housing credit providers as long as credit is provided to consumers | Binding regulation |
| Luxembourg | Limit on exposures to real estate development as a share of capital | | Binding regulation |
| Norway | Risk weights: 100% for exposures secured by mortgages on commercial immovable property | Banks using the standardised approach for credit risk | Binding regulation |
| Poland | LTV: 75%, or 80% if the part above 75% is insured or collateralised with funds from a bank account, government or NBP securities | | Binding regulation |
| | Risk weights: increased for exposures secured by mortgages on immovable property | | Binding regulation |
| Romania | Risk weights: 100% for exposures secured by mortgages on commercial immovable property | Banks using the standardised approach | Binding regulation |
| Slovenia | Risk weights: 50% for exposures secured by mortgages on commercial immovable property | Banks and savings banks, including branches of foreign banks from EEA | Binding regulation (CRR) |
| Sweden | Risk weights: 100% for exposures secured by mortgages on commercial immovable property | | Binding regulation |
| | Risk weights: increase in risk weights of corporate exposures (approximately 30%) | Banks using the IRB approach for capital requirements | Binding regulation |
| | Risk weights: floor of 25% | Banks using the IRB approach | Binding regulation (Pillar 2) |
| | Maturity: 2.5 years maturity floor under Pillar 2 | Banks using the advanced IRB approach | Binding regulation |
| | Other: estimation of the probability of default should anticipate a larger proportion of economic downturns with higher default rates | | Binding regulation |
| United Kingdom | Risk weights: 100% for exposures fully secured by mortgages on commercial immovable property. Dependent on annual average loss rates for commercial mortgage lending in the UK | Banks using the standardised approach | Binding regulation |
| | Risk weights: a slotting exercise to assign one of four different risk weights, ranging from 50% to 250%, to income-producing real estate loans on their books. | Banks using the IRB approach | Binding regulation |

Source: ESRB
Notes: Table refers to instruments that were active in 2017 but might have been implemented earlier.

[175] The asset management company, MARK Zrt., continues to operate on a market basis having been phased out of the macroprudential toolkit, as of 30 June 2017. In addition to this, the application of a SyRB to ensure credit institutions internalise the systemic risks arising from CRE NPLs and defaults.

# Annex 4 Systemically important cross-border institutions in the EU

| Parent country | Parent group | Subsidiaries | Subsidiary Country |
|---|---|---|---|
| Austria | Erste Group Bank | Česká spořitelna, a.s. | CZ |
| | | Erste&Steiermärkische Bank d.d. | HR |
| | | Erste Bank Hungary Zrt. | HU |
| | | Banca Comerciala Romana SA | RO |
| | | Slovenska Sporitelna, a.s. | SK |
| | Raiffeisen Bank International | Raiffeisenbank (Bulgaria) EAD | BG |
| | | Raiffeisenbank a.s. | CZ |
| | | Raiffeisenbank Austria d.d. | HR |
| | | Raiffeisen Bank Zrt. | HU |
| | | Raiffeisen Bank Polska SA | PL |
| | | Raiffeisen Bank SA | RO |
| | | Tatra banka, a.s. | SK |
| | Sberbank Europe | Sberbank d.d. | HR |
| | | Sberbank banka d.d. | SI |
| Belgium | KBC Group | CIBANK AD | BG |
| | | United Bulgarian Bank AD * | BG |
| | | Československá obchodní banka, a.s. | CZ |
| | | K&H Bank Zrt. | HU |
| | | Československá obchodná banka, a.s. | SK |
| Czech Republic | J&T Finance Group | J&T Banka, a.s. | CZ |
| | | Poštová banka, a.s. | SK |
| Denmark | Danske Bank | Danske Bank Oyj | FI |
| France | BNP Paribas | BNP Paribas Fortis SA | BE |
| | | BGL BNP Paribas SA | LU |
| | | Bank BGŻ BNP Paribas SA | PL |
| | Société Générale | Société Générale Expressbank AD | BG |
| | | Komerční banka, a.s. | CZ |
| | | Société Générale Bank & Trust S.A. | LU |
| | | BRD-Groupe Société Générale SA | RO |
| | | SKB banka d.d., Ljubljana | SI |
| Germany | Commerzbank | mBank SA | PL |
| | Deutsche Bank | Deutsche Bank Luxembourg SA | LU |
| Greece | Alpha Bank | Alpha Bank Cyprus Ltd. | CY |
| | | Alpha Bank Romania SA | RO |
| | Eurobank Ergasias | Eurobank Bulgaria AD | BG |
| | | Eurobank Cyprus Ltd. | CY |
| | | SC Bancpost SA | RO |
| | Piraeus Bank | Piraeus Bank Bulgaria AD | BG |

| | | | |
|---|---|---|---|
| | | Piraeus Bank SA | RO |
| Hungary | OTP Bank | DSK Bank EAD | BG |
| | | OTP banka Hrvatska d.d. | HR |
| | | OTP Bank SA | RO |
| | | Splitska banka d.d. ** | HR |
| Italy | Intesa Sanpaolo | Privredna Banka Zagreb d.d. | HR |
| | | CIB Bank Zrt. | HU |
| | | Banka Koper | SI |
| | | Všeobecná úverová banka, a.s. | SK |
| | UniCredit | UniCredit Bank Austria AG | AT |
| | | UniCredit Bulbank AD | BG |
| | | UniCredit Bank Czech Republic and Slovakia, a.s. | CZ |
| | | UniCredit Bank AG | DE |
| | | Zagrebačka banka d.d. | HR |
| | | UniCredit Bank Hungary Zrt. | HU |
| | | UniCredit Bank Ireland Plc | IE |
| | | UniCredit Bank SA | RO |
| | | UniCredit Banka Slovenija d.d. | SI |
| Netherlands | ING Bank | ING België NV | BE |
| | | ING DiBa AG | DE |
| | | ING Bank Śląski SA | PL |
| Portugal | Banco Comercial Português | Bank Millennium SA | PL |
| Spain | BBVA | Garanti Bank SA | RO |
| | Banco Santander | Bank Zachodni WBK SA | PL |
| | | Santander Totta, SGPS SA | PT |
| | | Santander UK Plc | UK |
| | CaixaBank | Banco BPI, SA | PT |
| Sweden | Nordea | Nordea Kredit A/S | DK |
| | | Nordea Mortgage Bank Plc | FI |
| | | Luminor Bank AB *** | LT |
| | | Luminor Bank AS *** | LV |
| | Skandinaviska Enskilda Banken | SEB Pank AS | EE |
| | | AB SEB bankas | LT |
| | | AS SEB banka | LV |
| | Swedbank | Swedbank AS | EE |
| | | Swedbank, AB | LT |
| | | Swedbank AS | LV |
| United Kingdom | HSBC | HSBC Bank Malta Plc | MT |
| | Royal Bank of Scotland | Ulster Bank Ireland DAC | IE |

Sources: SNL & ESRB.
Notes: Listed are the EU SII banking groups with at least one O-SII subsidiary located in another Member State. If the parent is not a designated SII at home, then it is included provided the parent has SII subsidiaries in at least two different Member States; the groups falling into this category are J&T Finance Group SE and Sberbank Europe AG. The O-SII classification is based on notifications to the ESRB, having taken effect in 2017. Organisational changes prior to 31 December 2017 are incorporated into this list; for instance *the acquisition of the United Bulgarian Bank AD by the KBC Group as of December 2016 and **the acquisition of Splitska banka d.d. by OTP Bank Nyrt from Société Générale as of May 2017. ***As of October 2017, DNB-owned institutions in Lithuania and Latvia became the Luminor Bank, which is owned by Luminor bank AB (Sweden, not an SII). This entity is owned by both Nordea (56% economic ownership) and DNB (44% economic ownership), although both have equal voting rights.