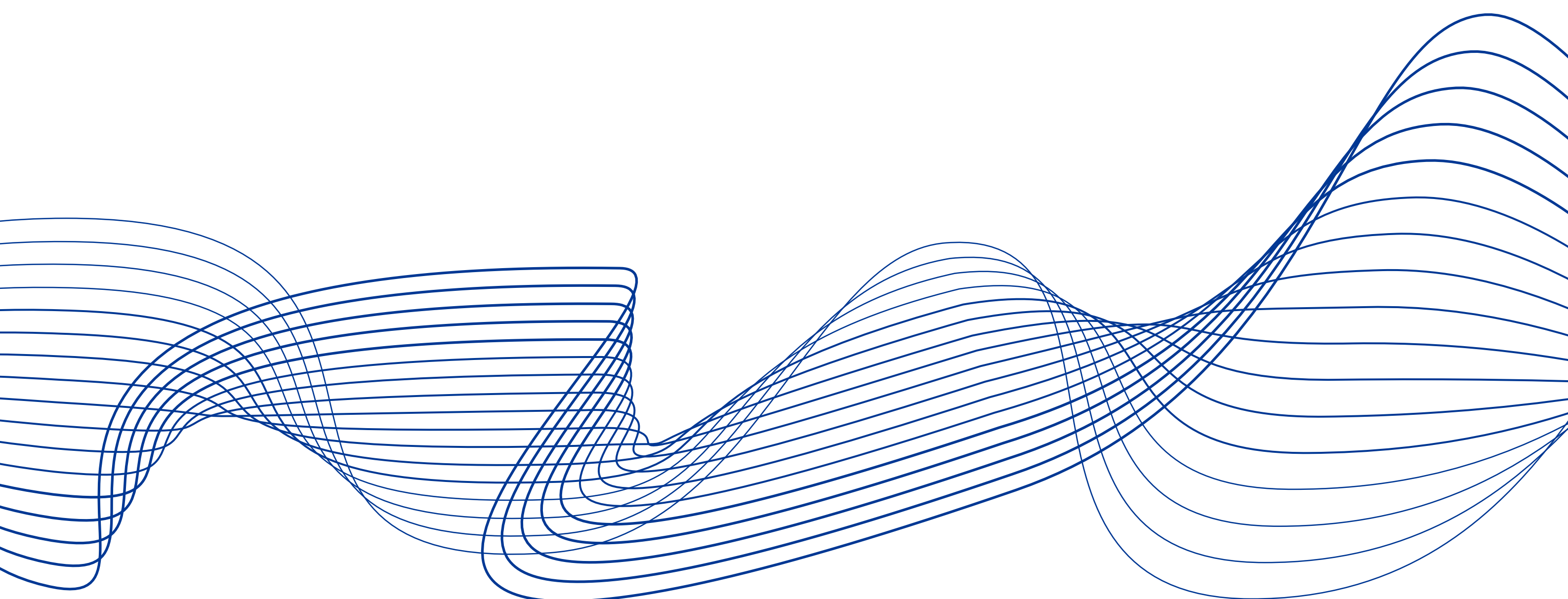
A Review of Macroprudential Policy in the EU in 2018

April 2019



ESRB
European Systemic Risk Board
European System of Financial Supervision

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Executive summary

This Review provides an overview of the measures of macroprudential interest that were adopted in the European Union (EU) in 2018. Most Member States adopted macroprudential measures in 2018. For the EU as a whole, more measures were taken than in 2017, i.e. the previous review period. Apart from the activation of the countercyclical capital buffer (CCyB) and the increase in the CCyB rate in several European Economic Area (EEA) Member States (see below), nine Member States introduced a systemic risk buffer (SyRB) or recalibrated the SyRB rate. After that, the most frequently introduced measure in 2018 pertained to caps on debt service-to-income (DSTI) ratios. Changes to the methodology used to identify systemically important institutions (SIIs) and set their buffers were also made relatively often. An increase over 2017 can be observed also in reciprocation measures following the ESRB's recommendations to reciprocate Finland's and Belgium's measures taken under Article 458 of the Capital Requirements Regulation (CRR).

As there are indications that the financial cycle is turning in some countries, more Member States tightened the CCyB. By the end of 2018, twelve countries in the EEA had decided on a positive rate. Despite extensive international and European guidance for the use of this instrument, differences in key features of the national frameworks remained. These include the objective of the instrument, the neutral buffer rate and the indicators used to inform the buffer decision. Given shortcomings of 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, some Member States developed adjusted indicators and placed greater weight on additional indicators and discretion to arrive at a policy judgement.

Financial stability risks in the real estate sector continued to be an important area of macroprudential policy in 2018. Most Member States had at least one measure in place designed to address risk in the residential real estate (RRE) sector, while almost half of the countries adopted measures to tackle risks in the commercial real estate (CRE) sector. Some RRE measures adopted in 2018 targeted a narrower geographical area than the country. The Member States to which the ESRB had issued warnings in 2016, about medium-term vulnerabilities resulting from the RRE sector, took further policy action in 2018, e.g. by expanding the available set of instruments or by using capital or borrower-based instruments.

Structural risks are addressed by the SyRB and the buffer for other systemically important institutions (O-SIIs). Finland activated the SyRB in 2018, and there are now 16 EEA Member States with a SyRB in place. As regards SIIs, most developments were of a technical nature. This includes changes in the list of SIIs, reflecting changes in systemic importance, and changes in the thresholds and buffer calibrations, reflecting the move of Nordea from Sweden to Finland, as well as the adoption of a longer phasing-in period for the buffers. Large differences in the calibration of O-SII buffer rates across countries remained in 2018, often reflecting the exercise of supervisory judgement and the absence of detailed guidance at the EU level.

Over the last years, Member States have increasingly used measures under Article 458 of the CRR to mitigate systemic risk. In particular, this macroprudential tool has been used to mitigate different types of systemic risk arising from different sources: increasing vulnerabilities in the real estate sector; a potential liquidity shock; and high indebtedness of the non-financial corporation (NFC) sector. The use of measures taken under Article 458 was mostly driven by the

view that Pillar 2 measures were not available to national authorities since they fall within the remit of ECB Banking Supervision (for significant institutions in the banking union). In general, the lengthy approval procedure has not proven to be a hindrance for the authorities that activated measures under Article 458 of the CRR. In line with the principle of pre-emptive and effective action, Member States should be able to recognise measures under Article 458 also for direct cross-border exposures, which the CRR II will enable them to do.

ESRB members also took measures of a macroprudential nature to address risks beyond the banking sector, despite the lack of a comprehensive macroprudential toolkit. Market-based finance can support the economy by providing an alternative source of funding in the event that the banking sector is impaired during times of stress. A side effect of the increasing role of the non-bank financial sector is that financial intermediation might migrate from the banking sector and give rise to new risks. Authorities need to be in a position to address such risks. Some Member States adopted new tools in 2018 and used their powers to address risks to financial stability outside the banking sector.

Finally, ESRB members took measures to mitigate risks associated with Brexit. Authorities at both EU and national level (including in the UK) have made preparations to mitigate risks to financial stability that might arise, especially if no agreement were to be concluded between the UK and the EU27. This includes in particular risks to financial stability relating to market access and the servicing of contracts. While the review period of this report covers 2018 only, in light of the relevance of Brexit, this Review also considers contingency measures and mitigating actions until 10 April 2019, when, at a Special European Council, EU27 leaders agreed to delay Brexit until 31 October 2019.

1 Introduction[1]

This Review provides an overview of the macroprudential measures adopted in the EU in 2018. Where possible, it covers the whole EEA. The Review is an update and a further development of the reports that the ESRB has been publishing since 2015.[2] These reports draw to a large extent on the notifications sent to the ESRB by the national authorities.[3] In addition, they draw on input from the ESRB members.

The Review is structured in two parts. The first part describes the changes in policy frameworks and outlines the national macroprudential measures that were adopted in 2018. It first reviews certain trends seen across different instruments and then turns to specific instruments. The second part consists of three special features. Special Feature A considers the use to date of national flexibility measures under Article 458 of the CRR by Member States and the lessons learnt from their experience with these measures; Special Feature B introduces the concept of macroprudential stance, in particular the interlinkages between the stance assessment and the policy action assessment; and Special Feature C provides an overview of the upcoming changes to the macroprudential provisions in the CRR and the Capital Requirements Directive (CRD IV).

In addition to this annual review, the ESRB provides information on macroprudential measures on its website.[4] An overview of macroprudential measures is also published on a monthly basis. A separate overview with currently active capital-based measures that apply to the SIIs in each Member State 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. Furthermore, the website contains information on the reciprocation of national macroprudential measures. Finally, the ESRB publishes a list of all the macroprudential authorities and designated authorities in the Member States. The last two items are updated on a regular basis.

Most macroprudential measures in the EU are taken against arising or prevailing risks in the banking sector.[5] Such risks are structural or cyclical in nature or combine elements of both. In recent years, the financial cycle across Europe seems to have entered an advanced stage, resulting from real estate markets and related lending activities. House prices are an important component of the financial cycle (see Box 1), and they have been growing steadily over the medium term for many European countries. In addition to booming real estate markets[6], risks in many EEA Member States are linked to the high level of indebtedness of the private and/or public

[1] This report was prepared by a team led by Stéphanie Stolz and composed of Elena Banu, Tiago de Oliveira Bolhao Páscoa, Jarn Denijs, Camille Graciani, Christian Gross, Sarah Lapschies, Glenna Montefort, Alexandra Morão, Jean Quin, Eric Schaanning, Ľuboš Šesták, Eiko Sievert, Juliet-Nil Uraz, Dominik-Robert Waide, Olaf Weeken (all ESRB Secretariat), Paulina Zlatkute (formerly ESRB Secretariat), Stephan Fahr (ECB), Stan Maes, Sergio Masciantonio, Rocío Villegas Martos (all European Commission) and Niamh Hallissey (Central Bank of Ireland).

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

[3] The CRR/CRD IV and the various ESRB Recommendations require the national authorities to notify macroprudential measures to the ESRB (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 and Recommendation B.1 of **Recommendation ESRB/2015/2** on the assessment of cross-border effects of and voluntary reciprocity for macroprudential policy measures).

[4] See the **national policy section** of the ESRB's website.

[5] For a more detailed discussion of the risks to EU financial stability, see also the forthcoming ESRB **Annual Report** 2018.

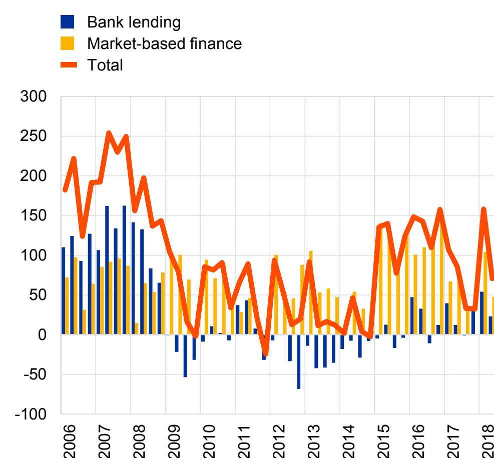
[6] See Chart 3.13 in **ESRB risk dashboard**, ESRB, Frankfurt am Main, November 2018.

sectors, which can amplify risks, and the low interest rate environment.[7] Furthermore, structural issues such as large stocks of non-performing loans and overbanking are weighing on banks' profitability and thus limit their capacity to build capital buffers internally.[8]

Chart 1

Net finance raised by euro area non-financial corporations

(EUR billions)



Sources: ECB and ESRB calculations.

Note: Market-based finance consists of debt securities, listed shares and unlisted shares.

The role the non-bank financial sector plays in financing the real economy is important and likely to grow. The EU non-bank financial sector, defined as all financial corporations excluding monetary financial institutions (i.e. banks, central banks and money market funds), is large, accounting for about 49%[9] of the EU financial system in 2017,[10] and plays an important function for the real economy. Chart 1, for example, shows that in the euro area new bank lending to non-financial corporations fell sharply following the financial crisis; at the same time, market-based finance, which includes debt securities, listed shares and unlisted shares, continued to grow. With the European Commission's Action Plan on Building a Capital Markets Union designed to provide new sources of funding for business and increase options for investors and savers, the importance of the non-bank financial sector is likely to grow, as non-bank entities will become increasingly involved in credit intermediation, be it directly or indirectly.[11]

The growing importance of the non-banking system has resulted in an increased focus on assessing and tackling risks and vulnerabilities in this sector. To design effective macroprudential tools, it is important to accurately identify the risk or vulnerability being targeted, given the large range of possible risks and types of entities. While the oversight of the banking sector has been revamped since the recent financial crisis, the oversight of the non-banking sector is lagging behind, in particular in terms of data collection, regulation and a resolution framework.

[7] **Macroprudential policy issues arising from low interest rates and structural changes in the EU financial system**, ESRB, Frankfurt am Main, November 2016.

[8] See **Is Europe overbanked?**, *Reports of the Advisory Scientific Committee*, No. 4, ESRB, Frankfurt am Main, June 2014.

[9] Source: Eurostat and ESRB calculations

[10] Within the non-bank financial sector, the shadow banking system, with total assets of just over €42 trillion at the end of 2017, accounted for around 40% of the EU financial system. See **EU Shadow Banking Monitor 2018**, No 3, ESRB, Frankfurt am Main, September 2018.

[11] See **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, Brussels, September 2015.

Box 1 – Financial cycles in Europe[12]

Financial conditions are a relevant factor in determining the economic outcome, but their cyclical properties can differ substantially from business cycle dynamics. Whilst financial conditions can be related to demand and supply shocks, which also determine business cycles, they at times can be determined by developments specific to the international financial sector.[13] Furthermore, the length of the financial cycle can differ from that of business cycles; for a selection of ten euro area countries the financial cycle length is on average 13 years, compared with an average of five years for the business cycle.[14] Expansionary and contractionary phases of financial and business cycles are thus not synchronised, only coinciding around two-thirds of the time, with financial cycles showing leading properties.[15] Similar results were found for the concordance of financial cycles across countries, whilst others also find a notably higher degree of concordance across countries in periods of stress.[16] Due to this imperfect synchronisation, financial cycles could exacerbate recessions or booms caused by factors in the real economy.

Characterising financial cycles is challenging, but could be achieved by exploring the joint dynamics of total credit and asset prices, also accounting for their interconnectedness and common movements at each point in time. The financial cycle is often approximated by a composite indicator; the one used in this box is based on a selection of asset prices and total credit provided to households and NFCs.[17] These different asset prices are those of housing, bonds and equity, with each market segment having its own cycle dependent on its historical median. The model's output could, for example, warn of a possible emergence of bubbles through credit-driven appreciations of assets.

Mainly driven by an upward trend in housing prices, the financial cycle in Europe has picked up since 2012 and has stabilised in recent years. The overall financial cycle for the euro area has trended upwards since 2012, with housing prices positively contributing since the end of 2015 (see the left panel of Chart A). The last time housing prices had done so was in the first quarter of 2007. The dynamics of total credit also support the upward-trending financial cycle, with shrinking negative contributions since 2012. These findings are consistent with the observed growth in credit provided to households and NFCs in a number of EU countries.[18] Negative contributions do not imply negative growth rates though, but rather a trend that is below the historical median (see Chart B). The contributions and financial cycle indicator are calculated at the country level, making cross-country comparisons a non-trivial exercise which requires a certain amount of caution. Comparing absolute growth rates across countries is complementary information as this is not directly taken into account in the model.

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12 Prepared by Jarn Denijs (ESRB Secretariat).

13 Habib, M. and Venditti, F., "**The global financial cycle, implications for the global economy and the euro area**", *Economic Bulletin*, Issue 6, ECB, Frankfurt am Main, September 2018, pp. 52-72.

14 Hiebert, P., Klaus, B., Peltonen, T., Schüler, Y. and Welz, P., "**Capturing the financial cycle in euro area countries**", *Financial Stability Review*, ECB, Frankfurt am Main, November 2014.

15 See Hiebert, P., Peltonen, T. and Schüler, Y., "**Characterising the financial cycle: a multivariate and time-varying approach**", *Working Paper Series*, No 1846, ECB, Frankfurt am Main, September 2015, p. 1, pp. 24-25. For more information on the definition of cycles used, see Harding, D. and Pagan, A., "**A comparison of two business cycle dating methods**", *Journal of Economic Dynamics and Control*, Vol. 27, No 9, Amsterdam, July 2003, pp. 1681-1690. For more information on coinciding cycles or concordance, see Claessens, S., Kose, A. and Terrones, M., "**Financial Cycles: What? How? When?**", *Working Paper Series*, Vol. 11, No 76, IMF, Washington D.C., April 2011.

16 Stremmel, H., "**Capturing the financial cycle in Europe**", *Working Paper Series*, No 1811, ECB, Frankfurt am Main, June 2015, p. 17.

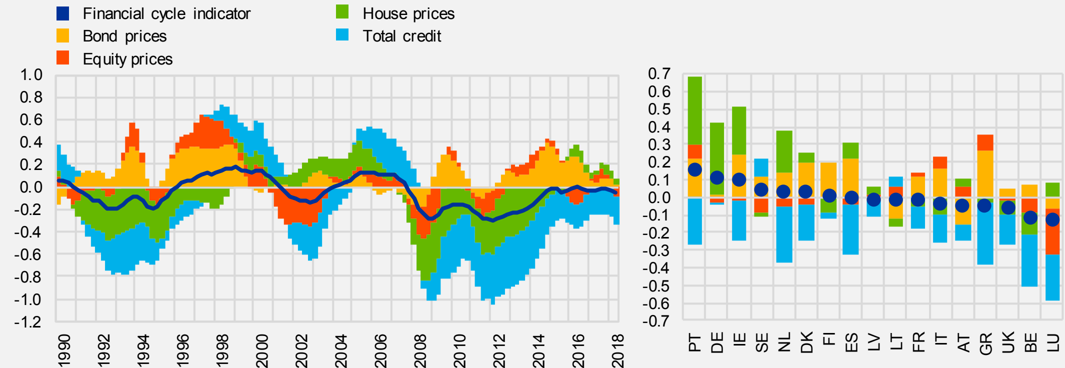
17 See Hiebert, P., Peltonen, T. and Schüler, Y., op. cit., p. 3, and Hiebert, P., Klaus, B., Peltonen, T., Schüler, Y. and Welz, P., op. cit.

18 For more information on credit growth and housing prices, see **ESRB risk dashboard**, ESRB, Frankfurt am Main, 13 September 2018; and the ESRB's **warnings on medium-term residential real estate vulnerabilities** issued in 2016.

Chart A

The financial cycle over time and across a subset of EU countries

(left panel: deviation in units over time; right panel: deviations in units per country for Q2 2018)



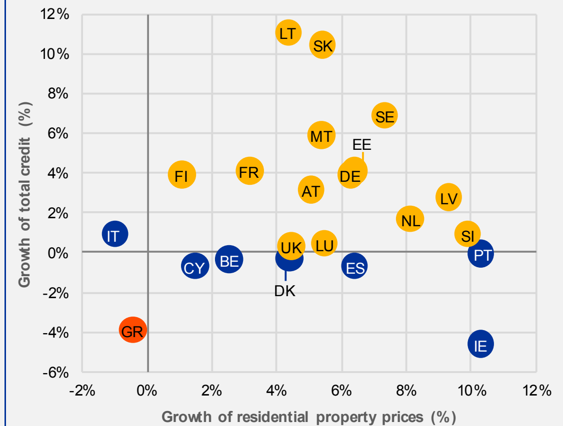
Sources: ECB and ESRB calculations.
*Notes: The financial indicator and its components (left panel) are computed using aggregate data for the euro area. In the right panel, country-specific estimates for the second quarter of 2018 are displayed. For certain countries, their respective time series were not long enough to allow for the construction of a representative historical mean, causing their exclusion from the right-hand panel (CY, MT, SI, SK). The methodology used to compute these results is the same as the one proposed in Hiebert, P., Peltonen, T. and Schüler, Y., op. cit. and used in Hiebert, P., Peltonen, T. and Schüler, Y., "**Coherent financial cycles for G-7 countries: Why extending credit can be an asset**", Working Paper Series, No. 43, ESRB, Frankfurt am Main, May 2017.*

The financial cycles of European countries show a substantial degree of heterogeneity, providing support for the use of macroprudential tools which are tailored to address the vulnerabilities building up in their specific jurisdictions. Country-specific estimates show that the level of the financial cycle indicator, as well as the contributions of its sub-components, varies across EU countries (see the right panel of Chart A).[19] Most countries see housing prices driving the financial cycle upwards, with the three financially most expansionary countries having housing prices contributing the most. In other countries the house price growth is relatively lower in this historical comparison, which includes cases where the growth has already slowed down after a period of significant increases. For most countries, bond prices fuelled the financial cycle, similar to the euro area aggregate estimates. These results are also consistent with the price developments in the sovereign bond and real estate markets observed in most countries over the last years.[20]

Chart B

Credit and real estate dynamics

(average year-on-year growth for the last four quarters)



Sources: ECB and ESRB calculations.
Note: The colours indicate the quadrant (blue: one negative value; gold: no negative value; red: two negative values).

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[19] The underlying model is supposed to provide some signals on where risks could emerge, which does not mean that these will certainly materialise. The model does not imply that countries with positive contributions of total credit to the composite indicator experience excessive credit growth, nor do negative contributions imply that credit is not growing substantially. Negative contributions also do not imply negative growth rates, but rather one smaller than the historical median. The exact contribution to the financial cycle indicator is a combination of the sub-cycle dynamics and the weight assigned to its component when constructing the index. Each component's assigned weight is positively influenced by the correlations that component has with the other components at that point in time; for total credit these are decreasing in recent years.

[20] See **Financial Stability Review**, ECB, Frankfurt am Main, November 2018, p. 6, pp. 10-12, pp. 31-32, and **Annual Report**, ESRB, Frankfurt am Main, 2018, p. 6, p. 10

2 General overview of the policy framework and measures

2.1 Introduction

This section describes the main trends in the macroprudential policy framework and the measures initiated in 2018, as reported to the ESRB. First, recent developments in the macroprudential policy framework in EU Member States are discussed. Where information is available, developments in Iceland, Liechtenstein and Norway — as members of the EEA — are also covered.[21] 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 countercyclical capital buffer, measures relating to the real estate sector, the systemic risk buffer and the buffers for systemically important institutions. 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 and of measures to mitigate risks associate to a no-deal Brexit.

2.2 Developments in the macroprudential policy framework

2.2.1 Developments at the national level

Some Member States have further developed their macroprudential policy framework. In particular, Spain has announced the establishment of its macroprudential authority, as set out in Recommendation ESRB/2011/3 on the macroprudential mandate of national authorities. Hence, all Member States but one (Italy) now have a macroprudential authority in place (see Table 1). Moreover, Spain introduced additional macroprudential tools for its sectoral supervisors.[22] In addition, Romania defined a new macroprudential policy strategy for its financial sector. Bulgaria has also enhanced its macroprudential toolkit.

[21] The authorities of Iceland, Liechtenstein and Norway participated in some of the ESRB's work as observers, although 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.

[22] Royal Decree approved on 14 December 2018: **Real Decreto-ley 22/2018, de 14 de diciembre, por el que se establecen herramientas macroprudenciales**.

Table 1
List of national macroprudential authorities and national designated authorities in the EU at the end of 2018

Member State	Macroprudential authority	Designated authority
Austria	Finanzmarktstabilitätsgremium (Financial Market Stability Board)	Finanzmarktaufsichtsbehörde (Austrian Financial Market Authority)
Belgium	Nationale Bank van België/Banque Nationale de Belgique	
Bulgaria	Консултативния съвет за финансова стабилност (Financial Stability Advisory Council)	Българската народна банка (Bulgarian National Bank)
Croatia	Vijeće za financijsku stabilnost (Financial Stability Council)	Hrvatska narodna banka
Cyprus	Κεντρική Τράπεζα της Κύπρου (Central Bank of Cyprus)	
Czech Republic	Česká národní banka	
Denmark	Det Systemiske Risikoråd (Systemic Risk Council)	Erhvervsministeren (Minister for Industry, Business and Financial Affairs)
Estonia	Eesti Pank	
Finland	Finanssivalvonta (Finnish Financial Supervisory Authority)	
France	Haut Conseil de Stabilité Financière (High Council for Financial Stability)	
Germany	Ausschuss für Finanzstabilität (Financial Stability Committee)	Bundesanstalt für Finanzdienstleistungsaufsicht (Financial Supervisory Authority)
Greece	Τράπεζα της Ελλάδος (Bank of Greece)	
Hungary	Magyar Nemzeti Bank	
Ireland	Central Bank of Ireland	
Italy	*	Banca d'Italia
Latvia	Latvijas Banka	Finanšu un kapitāla tirgus komisijas (Financial Supervisory Authority)
Lithuania	Lietuvos bankas	
Luxembourg	Comité du risque systémique (Systemic Risk Committee)	Commission de Surveillance du Secteur Financier (Financial Supervisory Authority)
Malta	Central Bank of Malta	
The Netherlands	Financieel Stabiliteitscomité (Financial Stability Committee)	De Nederlandsche Bank
Poland	Komitet Stabilności Finansowej (Financial Stability Committee)	Minister Finansów (Minister of Finance)
Portugal	Banco de Portugal	
Romania	Comitetul Național pentru Supravegherea Macroprudențială (National Committee for Macroprudential Oversight)	
Slovakia	Národná banka Slovenska	
Slovenia	Odbor za finančno stabilnost (Financial Stability Board)	Banka Slovenije
Spain	†	Banco de España
Sweden	Finansinspektionen (Financial Supervisory Authority)	
United Kingdom	Bank of England/Financial Policy Committee	

Notes: (*) In Italy the powers granted to set up a macroprudential authority have since expired, leaving the Banca d'Italia responsible for addressing financial stability concerns. (†) In Spain, the establishment of a new macroprudential authority, to be named the Autoridad Macroprudencial Consejo de Estabilidad Financiera (National Financial Stability Authority), was proposed in December 2018 and established in March 2019, thus falling outside the scope of this Review. Macroprudential authorities are the ones established in accordance with Recommendation ESRB/2011/3; designated authorities are the ones established in accordance with Article 136 of Directive 2013/36/EU (CRD IV) and responsible for setting the CCyB rates.

In Spain, a draft Royal Decree for the establishment of a national macroprudential authority was proposed in December 2018. The new National Financial Stability Authority (*Autoridad Macroprudencial Consejo de Estabilidad Financiera* – AMCESFI) would, as per the legislative proposal, be composed of top ranking officials from the Spanish Ministry of Economy and Business, the Banco de España, the Spanish National Securities Market Commission (*Comisión Nacional del Mercado de Valores* – CNMV) and the Spanish Directorate General of Insurance and Pension Funds (*Dirección General de Seguros y Fondos de Pensiones* – DGSFP). AMCESFI would be entrusted with the macroprudential oversight tasks of the Spanish financial system, with the aim of contributing to the stability of the financial system as a whole through the identification, prevention and mitigation of systemic risk.

Complementing the envisaged creation of a macroprudential authority in Spain, a Royal Decree-Law was passed in December 2018 empowering the sectoral supervisors with additional tools to prevent and mitigate risks which could affect the stability of the financial system. The Banco de España has been provided with the power to set limits on the indebtedness of economic agents and to directly limit the provision of credit. Furthermore, it was also deemed appropriate to attribute to the Banco de España the capacity to limit the assumption of risks at the sectoral level. To achieve these objectives, the macroprudential tools of the Banco de España were extended to enable the latter to increase the capital requirements on a specific portfolio of exposures, to limit the exposures of all credit institutions, or a subset thereof, to specific economic sectors and to establish limits and conditions on the granting of loans and on other operations, such as the acquisition of fixed-income assets and derivatives by credit institutions. The CNMV and the DGSFP have also been given additional powers to establish restrictions on the entities subject to their supervision with the aim of avoiding regulatory arbitrage and the deriving transfer of risk related to credit activity from the banking sector to the securities and insurance sectors (see Section 2.10.2).

The Banca d'Italia will continue to be responsible for addressing financial stability concerns. The Enabling Act No 170 of 12 August 2016 provided the Italian Government with the delegated power to establish a Committee for Macroprudential Policies (*Comitato per le politiche macroprudenziali*). However, the term for the exercise of the delegated powers expired before any action was taken. Therefore, Italy is currently the only Member State where a macroprudential authority within the meaning of Recommendation ESRB/2011/3 has not yet been established. Until such time as a macroprudential authority within the meaning of Recommendation ESRB/2011/3 is established in Italy, the Banca d'Italia will continue to be responsible for addressing financial stability concerns.

In Romania, the National Committee for Macroprudential Oversight (*Comitetul Național pentru Supravegherea Macroprudențială* – NCMO) also approved a new macroprudential policy strategy.[23] The NCMO's macroprudential strategy framework sets up an operational framework for macroprudential policy and the macroprudential supervision of the Romanian financial system. It establishes the principles of macroprudential policy conduct and the principles for the selection of macroprudential policy instruments. Among the changes effected by the NCMO to the previous framework for the macroprudential policy strategy of the Banca Naţională a

[23] The NCMO was established on 20 March 2017 by means of **Law No 12/2017** on the macroprudential oversight of the national financial system. The NCMO, whose tasks were previously carried out by the National Committee for Financial Stability, is an interinstitutional cooperation structure without legal personality. It comprises representatives of the National Bank of Romania, the Financial Supervisory Authority and the Romanian Government. Without prejudice to the powers conferred by law upon its member authorities, the mission of the NCMO is to ensure coordination in the macroprudential oversight of the national financial system by setting the appropriate macroprudential policy and instruments for its implementation.

României, the NCMO added two new intermediate objectives: (i) protecting the insurance system from the consequences of the insolvency of insurers; and (ii) mitigating the negative impact of the operational risks generated by the use of information and communication technology.

In Bulgaria, the macroprudential mandate of the Българската народна банка (Bulgarian National Bank) was enlarged. The new law[24] supplements the existing general macroprudential mandate of the Българската народна банка (Bulgarian National Bank) with a number of specific macroprudential tools. These tools include the power to: (i) collect information for macroprudential purposes; (ii) monitor, identify and assess the impact of systemic risks on credit institutions and the banking system; (iii) develop and implement national measures within the meaning of Article 458(2)(d) of the CRR aimed at limiting systemic risks; (iv) develop and implement measures aimed at limiting systemic risks associated with the accumulation of excessive credit growth; (v) develop and implement measures related to the mitigation of the concentration risk to specific economic sectors and industries; (vi) develop and implement additional minimum liquidity requirements; and (vii) carry out any other actions necessary for the achievement of the macroprudential objectives of the Българската народна банка (Bulgarian National Bank).

In particular, the measures that the Българската народна банка (Bulgarian National Bank) may develop in order to limit systemic risks associated with the accumulation of excessive credit growth concern banks' lending activity and may include requirements for: (i) the ratio between the amount of the loan and the value of the collateral; (ii) the ratio between the amount of the loan and the borrower's annual income; (iii) the ratio between the amount of current payments in relation to the servicing of the debt and the monthly income of the borrower; (iv) the maximum duration of the credit agreement; (v) the method of repayment of the credit; and (vi) other credit limitations.

In Belgium, additional liquidity management tools are now available to asset managers.[25] The ESRB Recommendation on leverage and liquidity in investment funds noted that some countries only had a small number of liquidity management tools available to asset managers. This can make it difficult for fund managers to handle unexpectedly high levels of redemptions. The following three new liquidity tools have therefore been introduced in Belgium: swing pricing, anti-dilution levies and redemption gates.

2.2.2 Developments at the European level

In December 2018, the ESRB General Board approved a policy report on macroprudential approaches to non-performing loans (NPLs), providing a policy response to a request by the EU Council.[26] The report concludes that no fundamental changes to the existing macroprudential toolkits seem to be required, although a number of refinements should be considered. In particular, further work is needed in areas relating to the use of sectoral capital buffers and the development of borrower-based measures. On the latter, it is proposed that borrower-based measures become available in the macroprudential toolkit of all Member States and that the possibility to design borrower-based measures for non-financial corporations is further explored (see Box 2).

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[24] Adopted by the national assembly of the Republic of Bulgaria on 13 December 2018.

[25] See the **Arrêté royal** or **Koninklijk besluit** of 15 October 2018.

[26] See **Action plan to tackle non-performing loans in Europe,** adopted by the ECOFIN on 11 July 2017.

Box 2 – Macroprudential approaches to non-performing loans[27]

The emergence and accumulation of non-performing loans (NPLs) can become a systemic problem when they affect a considerable part of the financial system, threatening its stability and/or impairing its core function of facilitating financial intermediation. If high NPL ratios affect only a limited number of banks or the loans are made to specific and not systemically relevant sectors, the NPL problem has no macroprudential dimension and can be properly resolved in the course of normal interactions between the affected banks and the microprudential authorities. In contrast, if NPLs are widespread, abundant and persistent through the banking sector or affect critical sectors of the economy, the NPLs may cause financial instability and generate significant system-wide costs, such as the reduction or misallocation of credit, depressed asset prices or the reinforcement of downturn spirals. It can also feed the loop between bank risk and sovereign risk and be an obstacle to the restructuring of banks and other indebted sectors of the economy.

In the European Union, systemic concerns arose from the abnormally high proportion of NPLs which accumulated on banks' balance sheets during the recent financial crisis, and their persistence after the crisis. To mitigate issues associated with high levels of NPLs and prevent them from being repeated in the future, a comprehensive approach combining a mix of complementing policy actions, at the national and European levels, was devised under the EU Council conclusions "Action plan to tackle non-performing loans in Europe", adopted by the Economic and Financial Affairs Council (ECOFIN) on 11 July 2017.[28] In particular, the ESRB was invited to develop, by the end of 2018, "macro-prudential approaches to prevent the emergence of system-wide NPL problems, while taking due consideration of procyclical effects of measures addressing NPL stocks and potential effects on financial stability".

In September 2018, the ESRB's Advisory Scientific Committee (ASC) published a report discussing the conceptual foundations for a macroprudential approach to NPLs.[29] The ASC report identifies various forms of market failures and imperfections which provide a rationale for policy action, aimed at preventing the excessive emergence and persistence of NPL problems, especially during economic downturns.[30] The ASC report links the identified market failures and imperfections with a wide range of available policies and argues for the need to establish intermediate objectives in this field. Finally, the report discusses relevant trade-offs in the design of preventive and corrective policies and the optimal speed of NPL resolution.

In January 2019, the ESRB published a policy report focused on macroprudential approaches to prevent the emergence of system-wide NPL problems, providing a policy response to the mandate given by the EU Council.[31] The policy report starts by identifying the main triggers, vulnerabilities and amplifiers that can drive system-wide increases of NPLs.[32] It

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27 Prepared by Alexandra Morão (ESRB Secretariat).

28 See **Action plan to tackle non-performing loans in Europe**, adopted by the ECOFIN on 11 July 2017.

29 Given its conceptual nature, **the report** neither focuses specifically on any particular country's experience, nor systematically reviews or assesses any of the policy measures already adopted, including the most recent ones, to deal with NPL problems in the EU.

30 Comprising unaddressed externalities, economies of scale and coordination failures, institutional distortions stemming from the accounting, regulatory and tax treatment of NPLs or the judicial and market structures needed for their efficient resolution, and moral hazard vis-à-vis the providers of the banks' safety net.

31 To follow up on the EU Council request, the ESRB established a dedicated policy work stream that presented its conclusions at the ESRB General Board meeting, held on 6 December 2018. The conclusions were sent to the Council of the EU before the end of 2018, as requested. For the final report, see **Macroprudential approaches to non-performing loans**, ESRB, Frankfurt am Main, January 2019.

32 Relying on the experience and expertise of ESRB members, especially from those Member States where system-wide increases of NPLs were observed in the aftermath of the recent crisis.

highlights the business cycle and asset price shocks as two of the main drivers of the systemic increase in NPLs in the last crisis, but also acknowledges the role played by vulnerabilities built up before the crisis – such as excessive credit growth, high indebtedness and banking practices – and structural factors – such as weaknesses in the legal and judicial system.

Regarding the policy messages, the report concludes that while no fundamental changes to the existing macroprudential toolkits seem to be required, some refinements should be considered. In particular, further work is needed in areas such as the use of sectoral capital buffers and the development of borrower-based measures (for both households and non-financial corporations). Capital-based instruments should also be considered to address vulnerabilities that could later result in system-wide increases in NPLs and macroprudential authorities should develop early warning systems to monitor the deterioration of credit losses from a macroprudential perspective.

Borrower-based measures can be activated at an early stage in the credit cycle affecting banks' lending standards when loans are granted. In addition to microprudential benefits, borrower-based measures are particularly useful to address strategic complementarities that can have adverse consequences besides increasing resilience of borrowers and lenders. Also by focusing on new lending, these measures may allow potential procyclical effects to be avoided. While many authorities already have borrower-based measures targeting households at their disposal (see Section 2.5), the report proposes that these tools should be available in all Member States. The report also proposes to further explore the possibility to design borrower-based measures for non-financial corporations.

Capital-based instruments should also be considered for addressing vulnerabilities that might later result in system-wide increases of NPLs. The report recommends using the countercyclical capital buffer to prevent the systemic build-up of macro-financial imbalances and/or to increase the resilience of banks to deal with NPL-related vulnerabilities. These buffers would then be used and released to increase the ability of banks to clean up the NPLs on their balance sheets at an early stage. The report also sees scope for the use of the SyRB when the potential systemic increase in NPLs is associated with pockets of vulnerabilities in specific market segments or for specific groups of debtors. Capital measures targeted at addressing excessive exposure concentrations should also be used when systemic risk appears to be building up in specific sectors/asset classes. When macroprudential authorities apply more targeted measures, they should follow a prudent approach in order to avoid procyclical effects and negative spillovers.

The report also elaborates on vulnerabilities and structural factors that fall outside the scope of macroprudential policy, notably the legal and judicial framework and banks' governance structures. Nevertheless, they merit consideration in the design of a macroprudential approach to NPLs, possibly conditioning its need and effectiveness. The report notes that inefficiencies in legal and judicial frameworks that remain in some Member States should be addressed, in particular regarding agreement on minimum standards of debt enforcement and collateral foreclosure to be adopted by all Member States. On banks' governance, the report not only mentions the microprudential concerns but also calls for macroprudential monitoring of developments in risk-taking in the financial system, in particular those resulting from banks' governance structures and potentially associated with competitive pressures leading to banks having an excessive risk appetite.

In addition, the ESRB discussed how to enhance information-sharing on branches for macroprudential purposes. Foreign branches have a significant share in the banking markets in a number of Member States. The experience of voluntary cooperation and information-sharing between relevant authorities has been positive so far. However, the available data and exchange of information on branches are currently focused mostly on microprudential purposes. Hence, the ESRB considered that a framework for information-sharing on branches might be warranted to ensure that the exchange continues in the future and for other potential cases (see Box 3). Furthermore, a coordinated approach at the EU level might reduce the complexity and costs of information-sharing arrangements for macroprudential purposes.

In 2017 the European Commission published its proposals for the ESRB Review.[33] 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 more intensively in order to inform its opinions, recommendations and decisions.

Furthermore, changes to the macroprudential provisions in the CRR/CRD IV are forthcoming. The CRR/CRD IV rules not only provide for the common regulatory framework for microprudential supervision but also for a set of macroprudential instruments to mitigate systemic risk in the banking sector.[34] The Council and the European Parliament agreed in December 2018 to amend these macroprudential provisions as part of the broader overhaul of the EU's prudential and resolution rules for banks ("banking package"). The ESRB already provided input to this review,[35] and Special Feature C outlines the main changes, notably highlighting the revisions to the Pillar 2 framework and the increased flexibility in the use of macroprudential instruments.

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[33] See **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, European Commission, 20 September 2017.

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

[35] See **ESRB response to the European Commission's Consultation Document on the "Review of the EU Macroprudential Policy Framework"**, ESRB, Frankfurt am Main, 24 October 2016.

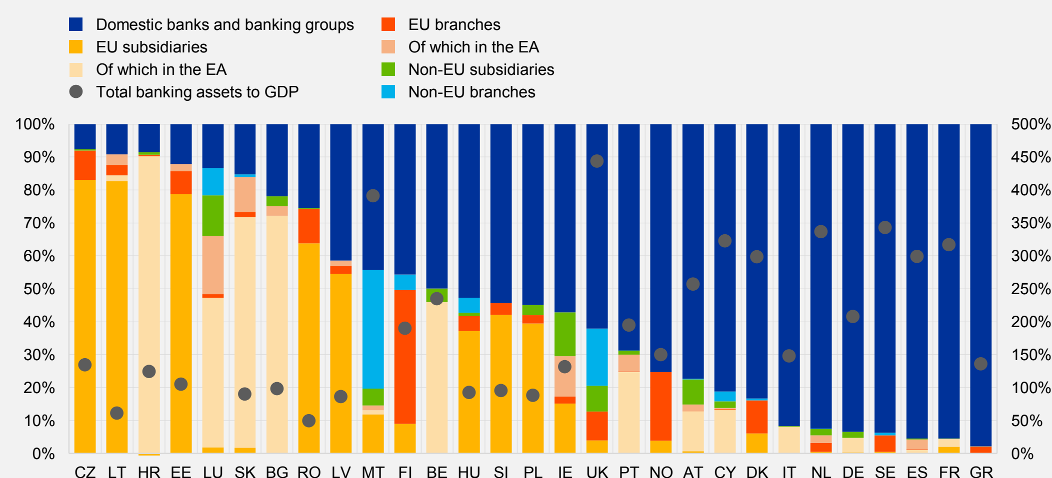
Box 3 – The need for information-sharing on branches[36]

Foreign branches have a significant share in the banking markets in a number of Member States (see Chart A). In two Member States, Finland and Malta, the share of branches already exceeds 40% of total banking sector assets and in Norway 20%.[37] In addition, while the banking sectors of seven central and eastern European (CEE) countries and Luxembourg are dominated by foreign subsidiaries, the market share of branches reaches up to 25% of banking sector assets in these countries. The share of EU branches and subsidiaries is generally significantly higher than that of non-EU affiliates with the exception of Malta, Ireland and the United Kingdom.

Chart A

Share of foreign affiliates in total banking sector assets across the EU (Q2 2018)

(left axis: percentage of market share; right axis: percentage of GDP)



Sources: ECB Consolidated Banking Data (CBD), Banking Structural Statistical Indicators (SSI) 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 2018, and correspond to the left axis. Where the data were available the assets held by EU branches or subsidiaries were split according to whether or not the respective parent was incorporated within the euro area or not. When no data were available for branches or subsidiaries incorporated in the euro area, everything was attributed to the EU; this was the case for CZ, DK, EE, FI, GR, HU, IE, PL, RO, SE and SI (EU subsidiaries) and for BE, CZ, DK, FR, GR, HU, IT, PL, RO, SE, SI and UK (EU branches); this however can also include instances where no such banks exist within that jurisdiction. The black dots refer to the sum of total consolidated assets of domestic banking groups and stand-alone banks with the total assets of foreign-controlled branches and subsidiaries as a percentage of nominal GDP of those countries for Q2 2018, corresponding to the right axis. The right-hand axis is truncated at 500%; as such, the true value for Luxembourg is 1,503%. For the United Kingdom, partial data result in the use of two databases (CBD & Banking SSI). For the UK annual data from 2017 were used from Banking SSI. Due to missing (CBD) data for Denmark, statistics here are consolidated with the ESRB Survey statistics, as submitted by the Danish authorities and Banking SSI. Data for Norway were provided directly by Norges Bank.

Although the majority of branches are of a relatively minor importance to the banking system of the host countries, some are considered important from a financial stability perspective. According to a survey conducted by the ESRB's Instruments Working Group (IWG) in November 2018, there are currently 20 branches with a market share greater than 4% of the total assets of the banking sector of a particular Member State and a further 43 branches with a market share exceeding 1%. Among these branches, members have identified 26 branches as

[36] Prepared by Ľuboš Šesták (ESRB Secretariat).

[37] The most recent available data did not include the relocation of the Nordea Group's headquarters from Sweden to Finland on 1 October 2018. After the relocation, the situation in Sweden and Finland will swap.

significant[38], and 11 as significant-plus[39]. There are 25 branches that would meet the criteria for being identified as O-SIIs according to the national frameworks, if they were subsidiaries instead of branches. Members also reported 22 cases when a subsidiary was changed into a branch in the last five years and the trend is expected to continue in the future.

In order to conduct a comprehensive analysis of systemic risk, macroprudential authorities need appropriate, accurate and timely information, **including on branches.** For example, the ESRB Regulation[40] acknowledges that the ESRB should have access to all the information necessary to perform its duties regarding macroprudential oversight. The ESRB also recommended that national macroprudential authorities should have the power to require and obtain in a timely fashion all national data and information relevant for the exercise of its tasks.[41] Where branches have a significant share in the banking system of a country, macroprudential authorities also need timely and granular data from these branches on a regular basis.

Taking into consideration the need-to-know principle, such data include both the information regarding the activities of the branch itself as well as regarding its parent group on a regular and ad-hoc basis. For example, such data on the activities of the branch might include:

1. Information on loans, deposits and exposures with breakdowns for the assessment of cyclical and structural systemic risks at the banking sector level and sectoral level.
2. Information for the calibration of borrower-based measures, where applicable.
3. Information on the interbank market for analysis of interconnectedness.
4. Information for the assessment of systemically important institutions.

Information on the banking group itself, such as its resilience to stress or plans for the operations of its branches, are also needed to assess to what extent the activities of a branch might be affected during stress situations. Particularly for significant or otherwise systemically relevant branches such information is necessary for the assessment of the risks to financial stability posed by the branch to the host country. As systemic risks can change over time, it is important that macroprudential authorities have the power to gain additional information on an ad-hoc basis, if necessary.

However, the available data and the exchange of information on branches are focused mostly on microprudential purposes. EU law does not preclude sharing supervisory information on branches and their parent groups for macroprudential purposes with designated or macroprudential authorities within or between Member States on a need-to-know basis. Nonetheless, existing provisions only explicitly cover the exchange of information between competent authorities for microprudential purposes. In addition, competent authorities might not be empowered to collect additional information from branches for macroprudential purposes, if such information is needed by macroprudential authorities. For example, in the Nordic-Baltic region, additional arrangements were deemed necessary to ensure a proper flow of information between authorities.

[38] According to Article 51 of the **CRD IV**.

[39] According to EBA Guidelines **EBA/GL/2017/14** on the supervision of significant branches.

[40] See **Regulation (EU) No 1092/2010**.

[41] Sub-recommendation C(2) of Recommendation **ESRB/2011/3** of the European Systemic Risk Board of 22 December 2011 on the macroprudential mandate for national authorities (OJ C 41, 14.2.2012, p. 1)

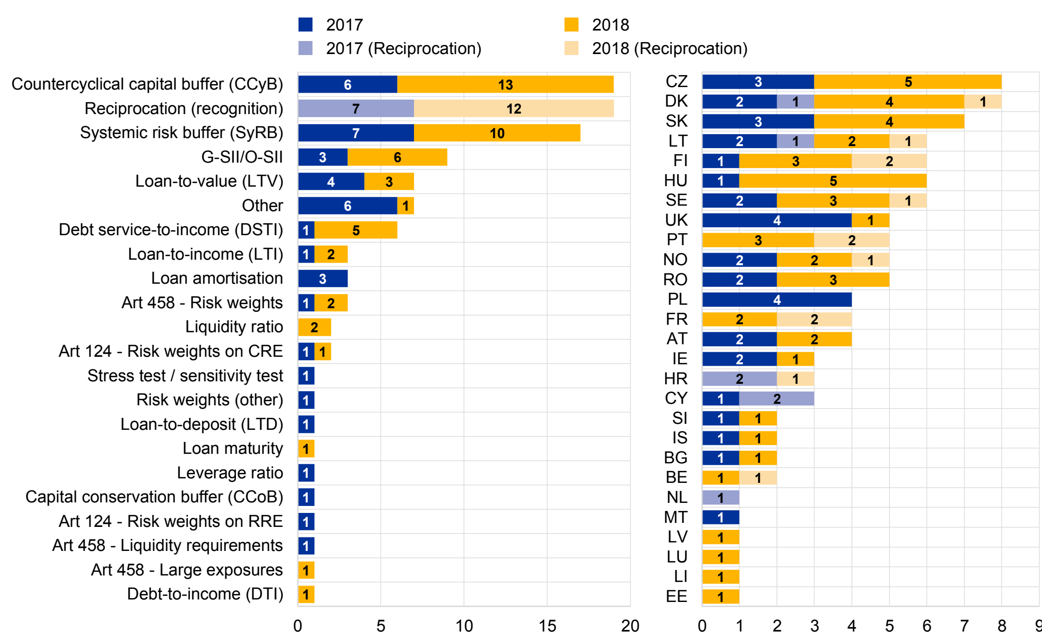
2.3 Developments in the use of macroprudential policy instruments

Compared with 2017, there was a significant increase in the total number of macroprudential measures adopted by EEA Member States (see Chart 2).[42] For this report, the broader concept of the measure of macroprudential interest is used. The increase over 2017 is, to a large extent, due to several reciprocation measures taken in 2018 following the ESRB's recommendations to reciprocate the Finnish and Belgium risk weight add-ons for RRE exposures of banks following the internal ratings-based (IRB) approach (see Section 2.9). Excluding reciprocation measures, the increase in the number of domestic macroprudential measures is attributable mostly to the activation of or increase in the CCyB rate in several EEA Member States. In addition, nine Member States introduced or recalibrated a SyRB. After that, the most frequently introduced measure in 2018 pertained to debt service-to-income (DSTI) caps. Changes in the methodology used to identify SIIs and set their buffers were also often made.

Chart 2

Substantial measures notified to the ESRB (2017-18)

(number of notifications received by measure type (left panel) and country (right panel))



Source: ESRB.

Notes: Notifications do not necessarily refer to new macroprudential measures, as they can also refer to changes to measures already in place. They also refer to the year the measure was initiated, rather than the year it was implemented. 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 chart 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 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.

[42] 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, Frankfurt am Main, 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.

As in previous years, Member States were active to varying extents. The Member States that registered the largest number of measures in 2018 were the Czech Republic, Denmark, Finland, Hungary, Portugal, France, Slovakia and Sweden. However, this should be put somewhat into perspective, as a number of initiatives in some of the countries were related to the reciprocation of other countries' measures or to the further development of measures already in place.

There are clear differences across Member States as regards macroprudential instruments that were effectively in use in 2018 (see Table 2). 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, applied fewer measures. Such variations can be due to differing views as regards the role of macroprudential policy, the different phase in the financial cycle in which countries find themselves, etc.

Table 2

Overview of active macroprudential measures in Europe (Q4 2018)

■ Currently applicable
□ Pending
* Several measures

	Austria	Belgium	Bulgaria	Croatia	Cyprus	Czech Republic	Denmark	Estonia	Finland	France	Germany	Greece	Hungary
Capital conservation buffer	■	■	■	■	■	■	■	■	■	■	■	■	■
Exemption from CCoB				■			■						
Countercyclical capital buffer (%)						1.25							
Pending CCyB (%)			□ 0.5			□ 1.75*	□ 1*			□ 0.25			
Exemption from CCyB				■			■						
Systemic risk buffer	■		■	■		■	■ *	■	□				■
G-SII(s)										□ 4*	1		
O-SII(s)	9	8	10	8*	□ 5*	7	6	4	3	6	13	4	8
Art 458 Risk weights for RRE & CRE		■							■				
Art 458 Liquidity requirements													
Art 458 Large exposures										■			
Art 124 Risk weights on CRE				■									
Art 124 Risk weights on RRE				■									
Art 164 LGD for RRE retail exposures													
Debt service-to-income (DSTI)					■	■		■					■ *
Loan amortisation													
Loan maturity								■					
Loan-to-deposit (LTD)													
Loan-to-income (LTI)						■							
Loan-to-value (LTV)					■	■ *	■	■	■ *				■
Risk weights (other)													
Stress test / sensitivity test			■		■								
Leverage ratio													
Liquidity ratio			■										■ *
Pillar II		■			■								
Other	■		■ *			■	■ *						■

	Ireland	Italy	Latvia	Lithuania	Luxembourg	Malta	Netherlands	Poland	Portugal	Romania	Slovakia	Slovenia	Spain	Sweden	United Kingdom	Iceland	Liechtenstein	Norway
Capital conservation buffer	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Exemption from CCoB		■			■	■		■			■				■			
Countercyclical capital buffer (%)				0.5							1.25			2	1	1.25		2
Pending CCyB (%)	□ 1			□ 1	□ 0.25						□ 1.5			□ 2.5		□ 1.75		□ 2.5
Exemption from CCyB					■	■		■			■			■	■			
Systemic risk buffer							■	■		■	■			■		■	■	■
G-SII(s)		□ 1*					1						□ 1*		□ 4*			
O-SII(s)	□ 6	3	□ 6*	4	8	3	5	11	6	9	5	6	5	4	15	3	3	2
Art 458 Risk weights for RRE & CRE														■				
Art 458 Liquidity requirements																		
Art 458 Large exposures																		
Art 124 Risk weights on CRE	■							■		■				■	■ *			■
Art 124 Risk weights on RRE	■					■		■				■					■	
Art 164 LGD for RRE retail exposures																		■
Debt service-to-income (DSTI)				■				■ *	■	■ *	■ *	■ *						
Loan amortisation							■				■			■ *			■	■
Loan maturity				■				■	■	■	■ *							
Loan-to-deposit (LTD)												■ *						
Loan-to-income (LTI)	■ *										■				■			
Loan-to-value (LTV)	■ *		■ *	■			■	■	■	■	■ *	■		■		■	■	■
Risk weights (other)					■ *									■				■
Stress test / sensitivity test	■				■					■	■ *				■ *			■
Leverage ratio															■ *			
Liquidity ratio								■						■				■
Pillar II						■						■		■ *				
Other	■			■		■		■ *		■	■ *			■				

Source: ESRB.

Notes: A coloured box means that a specific measure was active as at Q4 2018, whilst an empty box means that the measure has been announced but not yet introduced. An asterisk (*) denotes that more than one measure of that kind is in place or has been announced. For Denmark, the asterisk refers to the SyRB set for the Faeroes. In the row "Pending CCyB (%)", the asterisk denotes that more than one incremental increase was announced by Q4 2018. In the row "Countercyclical capital buffer (%)", the number in the box refers to the prevailing buffer rate as at Q4 2018, with no box meaning that the countercyclical capital buffer has not been set or a positive rate has been set but not implemented as at Q4 2018, which in this case would be reflected in the "Pending CCyB (%)" row. The number in the boxes for G-SIIs and O-SIIs refer to the number of such institutions identified in the latest identification exercise. 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 is regardless of its phase-in arrangements.

More than half of the Member States took some macroprudential policy action in 2018, 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. Reflecting the financial cycle (see Box 1) and as shown by Table 3, policy actions were of a tightening nature and mostly addressed cyclical risks (use of the CCyB, real estate instruments and some other cyclical measures). The most significant changes that occurred in 2018 are reviewed in greater detail further below.

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. The ESRB is currently developing a concept of macroprudential stance, which aims to close this gap (see Special Feature B).

Table 3

Tightening or loosening of macroprudential instruments in 2018

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

Source: ESRB.
Notes: ↑ (red) refers to a tightening; ↑↓ (gold) refers to both a tightening and loosening at the same time; → (grey/white) refers to no change; n/a stands for non-applicable. This denotes that no related measure has been notified to the ESRB and recorded in its Overview of national measures of macroprudential interest in the EU and the European Economic Area. "Real estate instruments" include any instrument (borrower-based or capital-based) dedicated to the residential or commercial real estate sector. The "Other instruments" column includes instruments which do not fall into any of the other categories. Tightening/loosening refers to the policy situation compared with the situation before the adoption of the measure. The table refers to measures taken in 2018 but which may sometimes come into effect later. Similarly, measures which came into effect in 2018 but were 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.

2.4 Use of the countercyclical capital buffer

2.4.1 Setting of domestic buffers

At end-2018, seven EEA Member States (CZ, IS, LT, NO, SE, SK, UK) had a positive CCyB buffer phased in, with five more (BG, DK, FR, IE, LU) having decided to introduce a positive rate with a phase-in over the course of 2019 or early 2020 (see Chart 3).

- **Three EEA Member States kept their positive CCyB rates unchanged over 2018, but announced an increase for 2019.** Sweden maintained its level of 2%, but decided to increase it to 2.5% in 2019. Iceland and Norway, which had increased their buffers towards the end of 2017 from 1.0% to 1.25% and from 1.5% to 2%, respectively, did not implement any changes to these levels over the course of 2018. Norway did, however, announce an increase in the CCyB to 2.5% at the end of 2018, to come into effect from 31 December 2019. Iceland is set to increase its CCyB to 1.75% in 2019.[43]

- **Four Member States increased their positive CCyB rates in 2018.** The Czech Republic continued the trend of the previous year by increasing its CCyB from 0.5% to 1.0%. It is set to increase it further to 1.25% from January 2019, to 1.5% from July 2019 and to 1.75% from January 2020. Slovakia raised its CCyB from 0.5% to 1.25% in 2018 and to 1.5% in 2019. The United Kingdom required a rate of 0.5% as of the middle of 2018 and of 1.0% towards the end of the year. At the end of 2017, Lithuania announced the introduction of a positive CCyB rate from 31 December 2018 onwards, with an initial rate of 0.5% which will be increased to 1.0% in mid-2019.

- **Five additional Member States are set to introduce a positive CCyB in 2019 or early 2020.** Four Member States announced a positive CCyB for the first time over the course of 2018, to become effective in 2019. France announced a rate of 0.25% (July),[44] and Ireland decided on a 1% rate (July), followed by Bulgaria with a 0.5% buffer (September).[45] The Danish Systemic Risk Council made two recommendations on the CCyB over the course of 2018. The first was to activate a CCyB of 0.5% (March), with a subsequent recommendation to increase the rate to 1% (September). Luxembourg announced the introduction of a 0.25% buffer rate (December), with the measure coming into effect as of the beginning of January 2020.

- **The remaining 19 EEA Member States kept the CCyB at 0% and did not announce their intention to increase it in the future.**

[43] As notified to the ESRB in February 2019 (i.e. after the end of the review period of this report), Iceland will require a CCyB rate of 2% as of 1 February 2020.

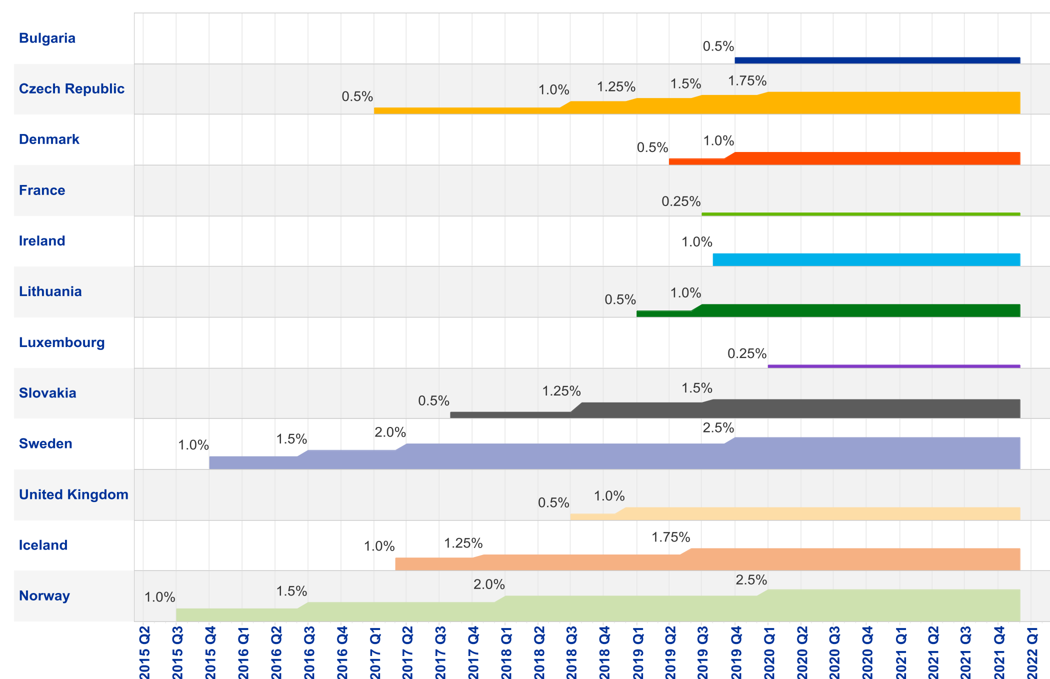
[44] As notified to the ESRB in March 2019 (i.e. after the end of the review period of this report), the HCSF in France decided to increase the CCyB rate to 0.5%, coming into force on 2 April 2020. See the HCSF **press release** on 18 March 2019, Paris.

[45] As notified to the ESRB in March 2019 (i.e. after the end of the review period of this report), Bulgaria will require a CCyB rate of 1% as of 1 April 2020.

Chart 3

Timeline of the announced countercyclical capital buffers in Europe

(percentages)



Source: ESRB.
Notes: The coloured line starts at the date on which the countercyclical capital buffer is effective. The timeline reflects the announced phase-in as of 31 December 2018. Since then, Bulgaria, France and Iceland announced an increase to 1% in Q2 2020, to 0.5% in Q2 2020 and to 2% in Q1 2020, respectively.

Several differences and similarities in the use of the CCyB can be identified. For the authorities announcing a CCyB for the first time in 2018, a range of rates between 0.25% and 1% was used. For example, it was noted by the Central Bank of Ireland that the setting of the rate at 1% acknowledges the exposure and susceptibility of the economy to a downturn or a materialisation of cyclical systemic risk, potentially arising from an external shock. This decision also reflects the expected limited impact on the credit environment and real economy at this stage. From the French perspective, a gradual implementation is carried out so as to reduce any adjustment costs and to avoid potential spurious sentiment of a looming crisis. A commonality amongst Member States which have implemented the CCyB is the fact that the buffer is thought of as a tool to increase bank resilience against cyclical losses, with leaning against the wind being mainly considered as a side effect.

A number of macroprudential authorities explicitly state they do not rely exclusively upon the credit-to-GDP gap as a prominent indicator for the calibration of the use of the CCyB. A collection of indicators is often employed instead to assist policymakers in the decision-making process. For example, Česká národní banka takes into account financial cycle indicators and various credit dynamics, in addition to observing results from the most recent stress-testing exercise. In Sweden, an assessment of systemic risk is undertaken using three groups of indicators which relate to credit terms and conditions on capital markets, lending in the Swedish economy and prices of relevant asset classes such as residential and commercial real estate. In addition, the UK and the Czech Republic follow the principle of a positive neutral gap whereby a rate above 0% for the CCyB is considered appropriate when risks are judged to be neither subdued nor elevated.

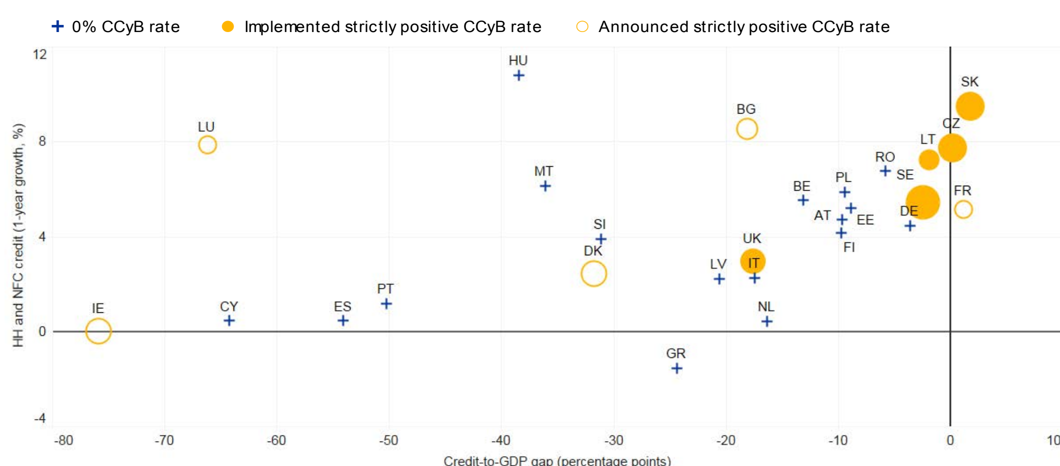
Lithuania takes the approach that a positive rate (1%) is considered to be a base rate for a moderate systemic risk environment.

Whilst a number of national authorities made changes to the CCyB rate, the buffer remains at 0% in several countries which may be considered to have relatively high credit growth and other cyclical developments. For example, a number of countries experience relatively high and increasing household and non-financial corporate credit growth and closing, yet mainly negative, credit-to-GDP gaps (see Chart 4). Whilst CCyB decisions are based on a range of variables and analyses, a cross-country comparison of the application of this instrument vis-à-vis credit growth, credit-to-GDP ratios and the credit-to-GDP gap suggests a certain heterogeneity in the policy response.

Chart 4

Loan growth versus credit-to-GDP gap and the countercyclical capital buffer

(x-axis: credit-to-GDP gap in percentage points; y-axis: credit to households and NFCs as a percentage)



Sources: European Commission, BIS, ECB, ECB calculations, ESRB and ESRB Secretariat calculations.
Notes: The current domestic credit-to GDP gap is denoted on the x-axis, NFC and household (HH) loan growth is denoted on the y-axis. Filled (empty) circles refer to the value of the applicable (announced) countercyclical capital buffer (CCyB) rate in a country, with the size of the circle reflecting the level of the rate, while crosses denote a CCyB rate set at 0% in a country. Data on the credit-to-GDP gap are not available for Croatia. Data on NFC and HH loan growth are not available for Iceland, Liechtenstein and Norway. Latest observations: 31 March 2018 for the credit-to-GDP gap, 31 December 2018 for loan growth, applicable and announced CCyB rates as of 31 December 2018.

2.4.2 Setting of buffers for third countries

The EU capital rules for banks also provide for 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 states the possibility of the ESRB recommending the setting of a CCyB rate for third countries, which has detailed its approach in a recommendation and decision.[46] The objective was to

[46] 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.

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 identify third countries that are material and focus their monitoring effort on those.

The ESRB, the Member States and the ECB share the responsibility of identifying and monitoring material third countries.[47] The ESRB, the ECB and the Member States establish to which third countries the banking systems in the EU, in the SSM and in their jurisdiction, respectively, have material exposures. When doing so, the ESRB uses a common methodology based on quantitative information on exposures of the EU banking sector to the real economy of third countries.[48] The ECB and the Member States may use their own methodologies.[49] The respective lists of material countries are reviewed, and potentially revised, annually, with the countries identified being monitored at regular intervals. The ECB and the Member States inform the ESRB of the material third countries that they will not monitor, because they are already being monitored by the ESRB. If the ESRB detects signs of excessive credit growth in those countries and 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. Likewise, if the ECB or Member States 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.

When revising its list of material third countries in 2018, the ESRB confirmed its 2017 list.[50] The initial list established in 2015 included the United States, Hong Kong, China, Turkey, Brazil and Russia. In 2017, Singapore and Switzerland were added. The 2018 revision resulted in the following:

- **The United States, Hong Kong, Singapore, Turkey, China and Brazil were confirmed.** The application of the criteria for identification confirmed their earlier identification.
- **Switzerland and Russia were retained on the list, despite fulfilling the criteria for deletion.** The exposures of the EU banking sector to Switzerland and Russia were quite stable at about €200 billion and €100 billion, respectively. Both countries were identified as material by eight Member States. In the case of Switzerland, five Member States left the monitoring to the ESRB, while in the case of Russia, all eight Member States left the monitoring to the ESRB. To avoid duplication of monitoring efforts, the ESRB decided to retain both countries on the list of material third countries.
- **Mexico and the Cayman Islands were not added to the list.** Regarding Mexico, the exposures of EU banks are as high as to some material third countries. However, only Spain identified Mexico as material.[51] Regarding the Cayman Islands, EU banks' exposures are

[47] See **last year's edition of this report** for a detailed description of the approach taken.

[48] See Articles 3 and 4 of Decision **ESRB/2015/3**.

[49] Furthermore, 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 are 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.

[50] In the annual revisions in line with Decision **ESRB/2015/3**, new countries can be added. Furthermore, the countries on the list can be either confirmed or not. In the latter case, they are dropped only if they meet the deletion criteria. Finally, discretion can be used, amending the result of the purely mechanical revision.

[51] The ECB, which had originally identified Mexico, deleted it from its list of material third countries in 2018 (see Table 4).

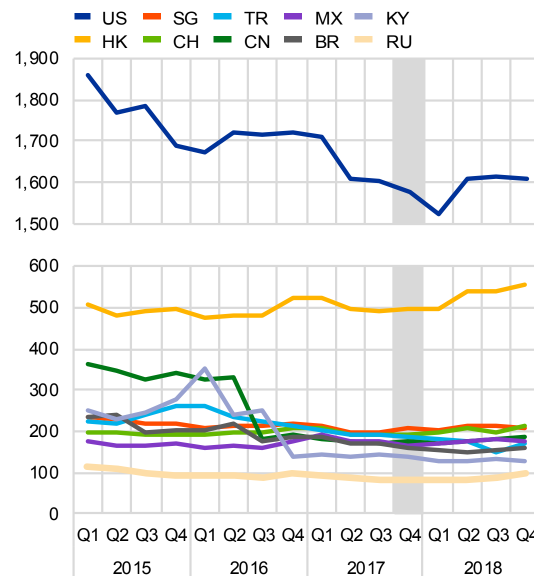
mostly not exposures to the real economy in the spirit of Decision ESRB/2015/3.[52] Furthermore, no Member State has identified that country as material since the Netherlands decided to drop the Cayman Islands from its list of material third countries (see Table 4). Hence, the addition of either Mexico or the Cayman Islands would not lead to a reduction in the duplication of monitoring efforts.

In sum, the 2018 list of third countries that are material for the EU banking sector coincides with the 2017 list and includes **the United States, Hong Kong, Singapore, Switzerland, Turkey, China, Brazil and Russia** in descending order of exposures for the EU banking sector in the fourth quarter of 2017, i.e. the cut-off date for the data underlying the 2018 revision.

Chart 5

Credit exposures of Member States vis-à-vis the eight material third countries monitored by the ESRB plus Mexico and the Cayman Islands

(EUR billions)



Sources: EBA and 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). The US values are depicted in the top panel, while all other countries are depicted in the bottom panel. In addition to these third countries identified as material, the chart also shows the exposures to Mexico (MX) and the Cayman Islands (KY). In 2018 the third countries were identified using data from Q4 2017 backwards, with that quarter highlighted in grey.

The exposure of the EU banking sector to the material third countries on the ESRB list is highly heterogeneous (see Chart 5 and Table A.1.1 in Annex 1). The exposure to the United States is by far the largest, standing at more than three and almost 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. It is almost 18 times larger than the exposure to Russia, which is the material third country to which the EU banking sector has the smallest exposures.

The exposure of the individual national banking sectors to the different material third countries is also highly heterogeneous (see Chart 6). The UK banking sector has by far the largest exposures to the material third countries, in particular the US, Hong Kong, Singapore and China. The UK is followed by France, Spain, Germany, the Netherlands and Italy. For each of these Member States, the exposure of their banking sectors is diversified to several material third countries, but their exposure to the US is significant for all of these Member States.[53]

[52] COREP data (used for the identification of material third countries) classify investment firms and hedge funds as corporates.

[53] For the banking sectors of the UK, Spain, France, Germany and the Netherlands, the exposure to the US is the largest, while for the banking sector of Italy, the exposure to the US is the second largest after the exposure to Turkey.

Chart 6

Credit exposures of EU Member States vis-à-vis the real economy of the eight material third countries as monitored by the ESRB

UK
FR
ES
DE
NL
IT
BE
AT
SE
LU
IE
DK
CY
PT
HU
SI
FI
HR
BG
LV
EE
LT

US
HK
SG
CH
CN
BR
TR
RU

Sources: EBA and ESRB calculations.
Notes: Data from Q4 2017 are used to reflect what was used to identify the different material third countries. The original exposures are all denoted in euro. Member States and third countries are sorted by their cumulative original exposures.

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 2018, Member States reviewed their lists for the second time, based on their respective methodologies developed in the past (see Table A.1.2 in Annex 1).

The lists of material third countries maintained by Member States did not change substantially compared with the previous year (see Table 4). 23 Member States maintained last year's list without any change. Three Member States added one third country each, and two Member States deleted one third country each.

Table 4

Material third countries as identified by the Member States

● Remained material
▲ New addition
✖ Removal
■ (Also) monitored by the identifying country (blue)
■ Only monitored by the ESRB Secretariat (yellow; marked "(y)" below)

	Third countries monitored by ESRB Secretariat								Other third countries																#	△
	USA	Hong Kong	Singapore	Switzerland	Turkey	China	Brazil	Russia	Angola	Australia	Bosnia-Herzegovina	Chile	India	Macao	Marshall Islands	Mexico	Montenegro	Morocco	Mozambique	Peru	Saudi Arabia	Serbia	Ukraine	UAE	#	△
AT	● (y)			● (y)	● (y)	● (y)		● (y)															●		6	
BE	●			●	●																				3	
BG	✖ (y)																								0	-1
CY								● (y)																	1	
CZ					● (y)			● (y)																	2	
DE	● (y)			● (y)									▲		●										4	1
DK																									0	
EE																									0	
ES	●				●		●					●				●				●					6	
FI																									0	
FR	● (y)			● (y)														●							3	
GR					● (y)																				1	
HR											●														1	
HU								● (y)									●					●	●		4	
IE	● (y)																								1	
IT	● (y)			● (y)	● (y)			● (y)																	4	
LT								● (y)																	1	
LU	● (y)	▲ (y)		● (y)	● (y)	● (y)	● (y)																		6	1
LV	● (y)							● (y)																	2	
MT	● (y)				● (y)			● (y)																●	4	
NL	●	●	●	●	●	●	●			●											●		✖		9	-1
PL																									0	
PT									●					●					●						3	
RO																									0	
SE	● (y)																								1	
SI																									0	
SK																									0	
UK	●	●	▲			●																			4	1
#	13	3	2	7	9	4	3	8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	66	
△	-1	1											1										-1			
ECB	●			●	●		●	▲								✖									5(±1)	
NO	● (y)																								1	

Sources: EBA and ESRB.
Notes: The markers show the material third countries as identified by the respective Member State. Third countries monitored by the ESRB Secretariat are ranked according to original exposures to the real economy in Q4 2017. Subsequent ordering of third countries is purely alphabetical. Markers in yellow signify that the respective Member State does not monitor this particular third country because the latter is already monitored by the ESRB Secretariat. Markers in blue signify that a Member State monitors an identified material third country. Dots refer to third countries that have been assessed as material in both June 2017 and June 2018. New additions to this list, as identified in June 2018, are represented by a triangle, whilst the 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.

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 (eight Member States) to nine (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: Ukraine is identified as material by two Member States (AT, HU) , while all other additional countries are identified as material by only one Member State.

In addition to the Member States, the ECB and Norway also notified their lists of material third countries to the ESRB. In 2018, the ECB added Russia and deleted Mexico. This resulted in an even larger 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, Turkey, Brazil and Russia). However, three countries remain identified by the ESRB only (Hong Kong, Singapore, and China). The difference can be explained by the fact that the exposures to Hong Kong, Singapore and China are mainly held by UK banks (see Chart 6).

Member States take different approaches to monitoring the eight material third countries identified and monitored by the ESRB. There have not been any changes since 2017: 15 EEA Member States 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 for broader purposes than only the CCyB.

2.5 Measures related to real estate lending

Real estate lending represents a significant part of credit activity in many countries, and policymaking is consequently very active in this area (see Table 5). Macroprudential authorities that seek to address vulnerabilities related to RRE and CRE markets have various instruments at their disposal for the banking sector. However, they face challenges in implementing macroprudential policies for the CRE sector given its extensive cross-border development. Also, the growing role of non-banks in financing CRE confirms the need to develop appropriate macroprudential tools targeting all parts of the financial sector.[54]

Table 5

RRE-related measures in countries which activated, recalibrated or announced policies in 2018

Legend: A = Already in place; I = Implemented in 2018; R = Recalibrated in 2018

		AT	BE	BG	CY	CZ	DE	DK	EE	ES	FI	FR	GR	HR	HU	IE	IT	LT	LU	LV	MT	NL	PL	PT	RO	SE	SI	SK	UK	IS	LI	NO
RRE	DSTI	I			A	I			A						R			A				R	A	I	I		A	R				
	DTI					I																						I				A
	LTI															A													A			
	LTV	I			A	A		A	A		R				A	A		A		A		R	A	I	A	A	A	R		A	A	A
	Amortisation																									R		A			A	A
	Maturity	I							A									A					A	I				A				
	Sensitivity tests				A													A					A						A			
	RWs		I								I			A					A				A			R	A				A	A
	Other					A		I																								
	CCyB*			I		R		R				I				I		R	I							R		R	A	R		R
	SyRB*								A																					A		
CRE	DSTI				A			A																								
	LTV				A																		A									
	RWs													A		A				A			A		A	A			A			A
	Other							A											A													
	CCyB*																											R				
	SyRB*								A		I			A	R																	

Source: ESRB.

*Notes: For Poland, the soft DSTI limit in place does not only apply to RRE-related loans, but to all loans extended to households. (*) CCyB and SyRB buffers are not measures targeting CRE or RRE risks directly, but have been cited by national authorities as tackling these risks as well as other vulnerabilities. For CRE risks, the reasons for implementing the CCyB and SyRB were strictly those reflected in the **Report on vulnerabilities in the EU commercial real estate sector**, ESRB, Frankfurt am Main, 26 November 2018. For measures targeting RRE risks the publication **Vulnerabilities in the EU residential real estate sector**, ESRB, Frankfurt am Main, November 2016 was also used as an input. Instead of using the implementation date, as with the other measures, for the CCyB the announcement date is used. For more details on the CCyB phasing arrangements see Chart 3 and Section 2.4.1.*

In 2018, countries which activated or recalibrated instruments for real estate risks used mostly borrower-based measures targeting the residential sector (see Annexes 2 and 3). The most commonly used measures were LTV and DSTI caps, with DTI limits being activated in CZ and SK. Countries also implemented or changed measures regarding maturities or amortisation requirements, which were sometimes tied to LTV or DTI/LTI levels. Three countries (BE, FI and SE) activated or recalibrated risk weights (RWs) for RRE exposures.

Borrower-based measures aim to address risks related to lending dynamics and have been implemented by several countries with high household credit growth or indebtedness.

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[54] See **Report on vulnerabilities in the EU commercial real estate sector**, ESRB, Frankfurt am Main, 26 November 2018.

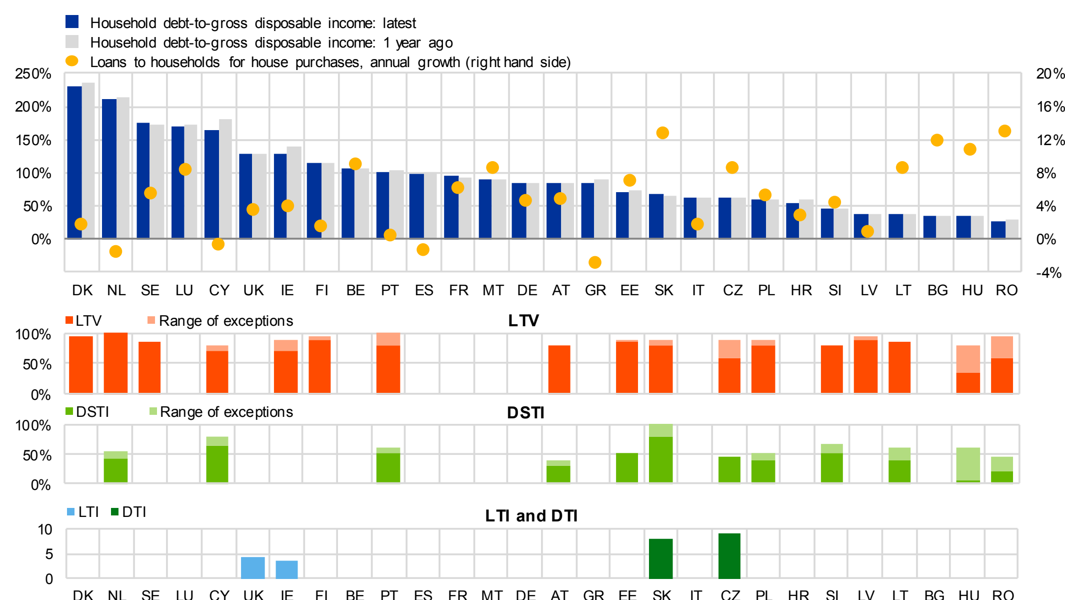
Mortgage lending grew strongly in many countries over the course of 2018. While this was the case mostly for economies with low levels of indebtedness, there were several situations where both vulnerabilities were present. Measures targeting borrower resilience are particularly suitable for addressing flow risks like pronounced lending dynamics, but in countries where indebtedness is relatively high they can also ensure a higher quality of loans and act as automatic stabilisers of debt levels.

The implementation of borrower-based measures is heterogeneous across Europe, reflecting country-specific factors. One can observe that for risks of similar intensity, countries make very different choices regarding the levels of LTVs/DSTIs/DTIs/LTIs and they also choose various combinations of instruments (see Chart 7). This could potentially be explained by country-specific structural factors of the credit market or the position in the financial cycle which makes the presence of either stock or flow risks more prominent. For instance, in a country with a high level of indebtedness and a large share of non-amortising loans, a DTI limit would be more effective than a DSTI cap which would act as a backstop to strong lending dynamics. Also, limits for LTVs, DTIs and DSTIs may differ considerably depending on the definition of collateral and monthly income, respectively (see Charts 8 and 9).

Chart 7

The level of household debt (upper chart) vis-à-vis the implementation of borrower-based measures (bottom three charts) across Member States

(%; multiples (LTI and DTI))

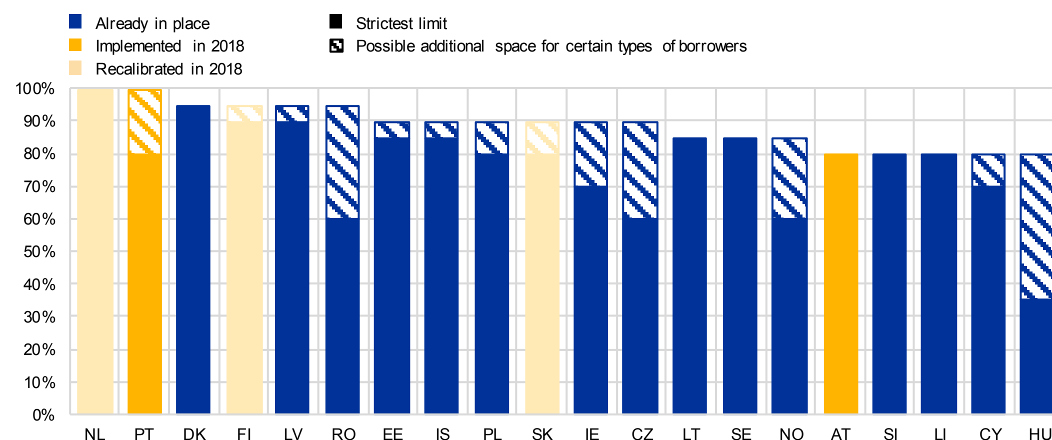


Sources: ECB (Quarterly Sector Accounts and Balance Sheet Items) and ESRB.
Notes: The chart shows household (HH) debt-to-gross disposable income, annual nominal growth of household loans for house purchases and applicable macroprudential measures (LTV, DSTI, LTI and DTI) in the EU countries. The data for indebtedness refer to Q3 2018 (recent, dark blue bars) and one year ago (i.e. Q3 2017, light blue bars). The darker bars for LTV, DSTI, LTI and DTI represent the currently applicable measures and the lighter shades indicate the range of possible exemptions from the cap. For some countries, the latest data on household indebtedness refer to Q4 2017 (BG, CY, EE, HU, LT, LU, LV, SK) and Q4 2016 (HR). Data for MT were provided by the Maltese authorities during the consultation for the publication of the Review of Macroprudential Policy in the EU in 2018; last data point refers to Q3 2018. For further detailed information on household indebtedness data, see "ESRB risk dashboard", June 2018, notes to Chart 2.10. Differentiation of DSTI and LTV limits is heterogeneous and subject to various rules among countries. For detailed descriptions of possible exemptions from the LTV and DSTI caps, and on how LTV, DSTI, LTI and DTI measures are set, as well as links to the official country announcements, see the "Overview of national macroprudential measures" database available on the ESRB's website. Latest observations: 30 December 2018 for LTV, DSTI and LTI/DTI limits, 30 September 2018 for indebtedness and 31 December 2018 for household loans for house purchases.

Chart 8

LTV limits in Europe

(percentages)



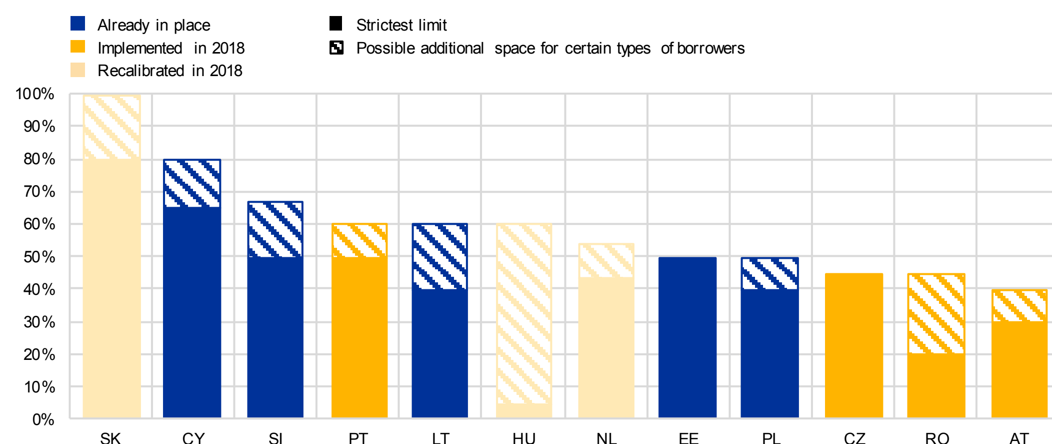
Source: ESRB.

Notes: The additional space for certain types of borrowers has different criteria in different countries: first-time buyers in the case of FI and CY, loans except those for financing buy-to-let residential property in the case of CZ, various types of state-guaranteed loans in the case of EE, LV, PL and RO, local currency loans in the case of HU and RO, first-time and second-time buyers (as opposed to buy-to-let) in the case of IE and IS, and credit (i) for purchasing residential property for own use and permanent residence or (ii) for purchasing immovable property held by the credit institutions and for property financial leasing agreements or (iii) for other purposes in PT. NO is the only country with a separate LTV limit set for Oslo which is 60% for secondary dwellings. In the case of SK, there is a gradual phase-out of loans with LTV over 80%. For more details see Annexes 2 and 3 and the remainder of this Section.

Chart 9

DSTI limits in Europe

(percentages)



Source: ESRB.

Notes: The additional space for certain types of borrowers has different criteria in different countries: higher income earners for HU and SI, debtors with local currency loans and loans with higher interest-rate fixation periods in the case of HU, debtors with local currency loans and first-time buyers of homes in the case of RO, debtors with local currency loans for CY, and absorbing capacity for interest rate shocks for EE. For LT, up to 5% of the total amount of credit related to real estate granted by each institution in each year may be granted to borrowers with a DSTI of up to 60%, in these exceptional cases the credit provider has to have a reasoned explanation that such credit is compatible with responsible lending principles. In the case of AT, an interval of 30% to 40% is recommended with no specific rules. In SK, borrowers with a DTI of a maximum of 1 (or 1.5 in the case of leasing) can have a DSTI of up to 100% (please note that in the case of SK disposable income is defined as net income less the minimum subsistence amount, including the minimum subsistence amount for children and spouse, if applicable). PT applies an exemption for a DSTI of 60% for a small share of debtors (up to 20% of the total amount of credit granted by each institution in each year may be granted to borrowers with a DSTI of up to 60%). In NL the exact level of the DSTI limit is dependent on the type of credit, the income of the debtor, the interest rate and the age of the debtor. For more details see Annexes 2 and 3 and the remainder of this Section.

The following countries took measures during 2018:

- **Austria:** The Austrian Financial Market Authority (*Finanzmarktaufsicht* – FMA) issued in January and April 2018 a Recommendation regarding enhanced communication with banks. The FMA views loans with a down payment of less than 20%, maturities over 40 years or loan repayments up until an age of 80 years as very risky and announced that individual banks engaging in such risky lending behaviour might face additional supervisory measures. From the perspective of affordability, the FMA recommends full amortisation of loans. Loans with several years of interest-only payments are seen as critical. In June 2018, the Oesterreichische Nationalbank (OeNB) recommended the following benchmarks: a minimum of 20% of own funds in real estate financing, borrowers' debt service including interest should not take up more than 30%-40% of households' net income (also considering the expected development of income over the lifecycle). Furthermore, the OeNB specified that maturities at origination should not exceed 35 years. New loans above those thresholds should be the exemption, and comprehensive risk assessments of those loans should be undertaken. In September 2018, the Austrian Financial Market Stability Board (*Finanzmarktstabiltätsgremium* – FMSB) decided to enhance its public communication on sustainable lending standards, in line with previous statements made by the OeNB and the FMA. The share of a borrower's down payment/own funds in real estate financing should not fall below a benchmark of 20%. Maturities at origination of new mortgage loans should exceed 35 years only in exceptional cases. In order to limit borrowers' expenses on debt service (including interest payments), the FMSB expects banks to assess borrowers' income as well as living expenses in a prudent manner. Only regular, verified and sustained sources of income should be acknowledged in the loan-granting process. As a benchmark, the debt service should not exceed 30% to 40% of households' net income. Irrespective of the above-mentioned benchmarks, the assessment of a borrower's creditworthiness should be comprehensive and take into account all available information.

- **Belgium:** The Nationale Bank van België/Banque Nationale de Belgique imposed a new measure under Article 458 of the CRR in April 2018, building on and tightening a measure that was active between 2013 and 2017.[55] Credit institutions authorised in Belgium using the IRB approach are required to apply a risk weight add-on for retail exposures secured by residential immovable property located in Belgium. This measure has two components: (a) a flat risk weight add-on of 5 percentage points; and (b) a proportionate risk weight add-on consisting of 33% of the exposure-weighted average of the risk weights applied to the portfolio of retail exposures secured by residential immovable property located in Belgium. This new measure will be in place for a period of two years.

- **Czech Republic:** Starting on 1 October 2018, Česká národní banka included income-based measures in its mortgage lending recommendations. Česká národní banka recommends to banks that mortgage debt to net annual income (DTI ratio) should not exceed the value 9 and at the same time that debtors should not have a debt service-to-net monthly income (DSTI ratio) greater than 45%. These requirements are subject to a speed limit of 5% of loans, meaning that for 5% of the volume of new loans banks are exempt from complying with these income-based measures.

[55] The measure had been adopted in 2013 (effective since 2014), then prolonged in 2015 (effective in 2016), and then expired in May 2017. The previous RW measure (Article 458) stipulated that banks that use the IRB approach should have applied a 5 percentage point add-on to the risk weights of mortgage loans granted to Belgian residents and covered by residential real estate in Belgium. The Nationale Bank van België/Banque Nationale de Belgique issued a recommendation to Belgian IRB banks to maintain sound lending standards and to continue the application and reporting of capital buffers as per the expired measure.

- **Denmark:** National authorities introduced in 2018 a new measure aimed at restricting the number of highly indebted borrowers. The measure was introduced through consumer protection legislation and is considered permanent in nature. According to the Executive Order on good practice for mortgage lending, new borrowers with a DTI above 4 and an LTV above 60% should have an interest rate fixation period of at least five years and can only obtain deferred amortisation if the interest rate fixation period is 30 years.

- **Finland:** Authorities introduced in the first quarter of 2018 a 15% risk weight floor for the average RRE risk weights for credit institutions applying the IRB approach. The floor was implemented through Article 458 of the CRR, thus it works as a temporary measure and must be reassessed after two years and subsequently on an annual basis.

  In the third quarter of 2018, the Finnish Financial Supervisory Authority (*Finanssivalvonta* – FIN-FSA) reduced the loan-to-collateral (LTC) cap from its initial (maximum) level of 90% to 85%. The LTC cap remained at 95% for first-time home buyers.

  Two other recommendations were issued by the FIN-FSA Board in 2018 trying to address other specific borrower issues. The first recommendation (March 2018) was introduced for banks to avoid very long housing loan maturities that deviate from prevailing practice and the use of long interest-only periods without special reasons. The second recommendation (May 2018) targeted loans to housing companies which indirectly contribute to household indebtedness. In Finland, certain loans are taken by housing companies, but in practice they are paid back by households holding the shares of these companies; this type of loans has been growing quite rapidly. Therefore, the FIN-FSA issued a recommendation for banks to take housing company loans into account when testing housing loan applicants' debt servicing ability.

- **Hungary:** The Magyar Nemzeti Bank (MNB) tightened the DSTI cap[56] for particular types of loans, with the following amendments applicable as of 1 October 2018.

  (a) New DSTI limits are applicable[57] for HUF mortgage loans with over five years of maturity:

  - 25% and 30% DSTI limits for variable rate mortgage loans and for mortgage loans with an interest rate fixation period of less than five years;
  - 35% and 40% DTSI limits for mortgage loans with at least five years but less than ten years of interest rate fixation will be applied, depending on the income of borrowers;
  - the current limits continue to apply for loans with interest rate fixation periods of ten years or more.

  (b) New differentiated DSTI limits pertaining to mortgage loans denominated in euro or other foreign currencies with over five years of maturity were also introduced as of 1 October 2018 depending on whether their interest rate fixation period is at least five years or below that. For euro-denominated loans, the DSTI range is 15% to 30%. For loans denominated in currencies other than HUF or euro, the DSTI range is 5% to 15%. Both ranges depend on the interest rate fixation period and the income of the borrower.

[56] The MNB Decree 32/2014 stipulated a DSTI limit ranging from 10% to 60%, differentiated according to the currency of the loan and the net income of the borrower. This measure was effective from January 2015.

[57] There are two sets of limits defined: for an income below HUF 400,000 and for an income above HUF 400,000. The current limits are 50% and 60%, respectively.

(c) The income threshold of preferential DSTI limits will be increased as of 1 July 2019; more specifically, the threshold of the net income of borrowers above which 60% of indebtedness is allowed will be increased from HUF 400,000 to HUF 500,000, to account for the rise of the nominal and real wages in Hungary since the introduction of the measure in 2015.

(d) The beneficial 85% discount rate on the mortgage loan instalments with longer interest rate fixation periods will be phased out.

- **The Netherlands:** The legal LTV limit was first introduced in 2012, at a level of 106%. Since then, the Dutch Financial Stability Committee (*Financieel Stabiliteitscomité*), chaired by the president of De Nederlandsche Bank, has advised that it should gradually be reduced by 1 percentage point each year. In 2018, the LTV limit reached 100%. This level is meant to be permanent. The debt service-to-income limits, consisting of a matrix of limits for different levels of income and interest rate, are adjusted annually depending on the level of risks.

- **Portugal:** The Banco de Portugal implemented in July 2018 a recommendation to banks to introduce a comprehensive set of borrower-based measures. An LTV limit was set at 90% for those buying a property for own use and permanent residence, 80% for those buying property for other purposes and 100% for those purchasing immovable property held by the credit institutions themselves and for property financial leasing agreements. A DSTI limit was set at 50% with two exceptions: up to 20% of the total amount of credit granted by each institution in each year may be granted with a DSTI of up to 60% and up to 5% of the total amount of credit granted by each institution in each year may exceed the limits to the DSTI. Moreover, the calculation of the DSTI is to take into account instalments associated with all of the borrower's loans, i.e. the sum of mortgage and consumer loans. In determining the maximum DSTI, banks must also consider the impact of an interest rate rise on the numerator, in the case of variable or mixed interest rate agreements, and a reduction in income of at least 20%, if the borrower's age at the term of the loan contract is higher than 70 years old, except if the borrower is already retired at the time of the creditworthiness assessment. The recommendation also stipulates a maturity limit of 40 years for mortgage loans (which is to gradually decrease to 30 years by the end of 2022) and of ten years for new consumer credit agreements. Regarding amortisation, the Banco de Portugal recommends that loans that include grace periods for principal and/or interest payments should be avoided.

- **Romania:** The Banca Naţională a României amended the existing regulation[58] stipulating credit conditions and imposed a maximum DSTI limit of 40% for national currency loans and 20% for FX loans. The measure considers the overall level of indebtedness, for both mortgage and consumer loans. The maximum DSTI can be 5 percentage points higher for first-time home buyer loans for borrower-occupied dwellings. A maximum of 15% of each creditor's portfolio of new loans to households can be exempted from the application of the DSTI limits. This new measure will be effective from January 2019.

[58] See **NBR Regulation No 17/2012** on certain lending conditions, as subsequently amended and supplemented previously stipulated only explicit stress-testing requirements for establishing a maximum DSTI for consumer loans, covering interest rate, FX and income shocks.

- **Slovakia:** Národná banka Slovenska, in consultation with the Ministry of Finance of the Slovak Republic, adopted a decree in 2018 to amend the existing macroprudential measures and introduce new ones with effect from 2018. The existing LTV and DSTI measures became binding. The previous stipulations followed their course: (a) the LTV limit was tightened to 90% (from 100%), with no more loans with LTV>90% and the share of loans with LTV>80% to reach 30% by the end of 2018 (and 20% by July 2019); and (b) the DSTI limit was further lowered to 80% in 2018 (from 85%), for both new and existing loans and subject to an interest rate shock of 2 percentage points, if the interest rate is not fixed (borrowers with a DTI of a maximum of 1.5 can have a DSTI of up to 100%). Moreover, a DTI limit of 8 was introduced in 2018, with a speed limit of 15% of loans for 2018, meaning that up to 15% of new loans could be granted without a maximum DTI limit during this year.
- **Sweden:** In March 2018, Swedish authorities introduced an additional amortisation requirement to the existing one linked to the LTV.[59] Households are required to amortise an additional 1% of the mortgage, if their LTI is above 450%. Moreover, in 2018, Swedish authorities replaced a Pillar 2 requirement for a risk weight floor for Swedish mortgages with a macroprudential measure facilitated under Article 458 of the CRR. The measure is intended to maintain the current level of capital requirements for mortgage exposures in Sweden and to ensure a level playing field in the Swedish mortgage market by counteracting potential regulatory arbitrage and leakages. Given the re-domiciliation of Nordea’s headquarters to Finland, there is the possibility that the institution will organise its operations through branches. Therefore, using Article 458 of the CRR facilitates reciprocation amongst macroprudential authorities. The measure consists of a credit institution-specific minimum level of 25% for the average risk weight on Swedish housing loans applicable to credit institutions that have adopted the internal ratings-based (IRB) approach.

Capital-based instruments not specifically targeted at real estate exposures are part of the policy mix in some countries. Most countries have, among their main objectives, to ensure the resilience of the banking sector against any type of shock and vulnerability, given that sometimes it is difficult for countries to disentangle broader risks related to cyclical developments in credit and high levels of indebtedness from those stemming directly from real estate sectors. Authorities choose to activate or recalibrate buffers such as the CCyB and the SyRB in order to enhance bank resilience against the entire set of potential risks.

Cyclical risks related to the real estate sector are often part of the authorities’ broader decision to implement the CCyB. Countries such as Bulgaria, the Czech Republic, Denmark, France, Iceland, Ireland, Slovakia, Sweden Lithuania, Luxembourg, Norway and the United Kingdom have all announced new or increased CCyB rates in 2018 and cited among the indicators on which they based their decision factors related to real estate lending or household indebtedness. The CCyB rates that became applicable in 2018 were those of Lithuania (31 December), Slovakia (1 August) and the United Kingdom (28 November). Slovakia was the only country which reported that both RRE and CRE risks were taken into consideration when setting the CCyB.

Vulnerabilities related to real estate were addressed in some countries also by the SyRB. Croatia, Estonia, Iceland and Hungary have implemented a SyRB and pointed out that RRE or CRE vulnerabilities were one of the reasons the measure was implemented. Moreover, Hungary set its SyRB rate for different banks based on the bank-specific ratio of domestic problem CRE project exposures and held-for-sale CRE to the domestic Pillar 1 capital requirement.

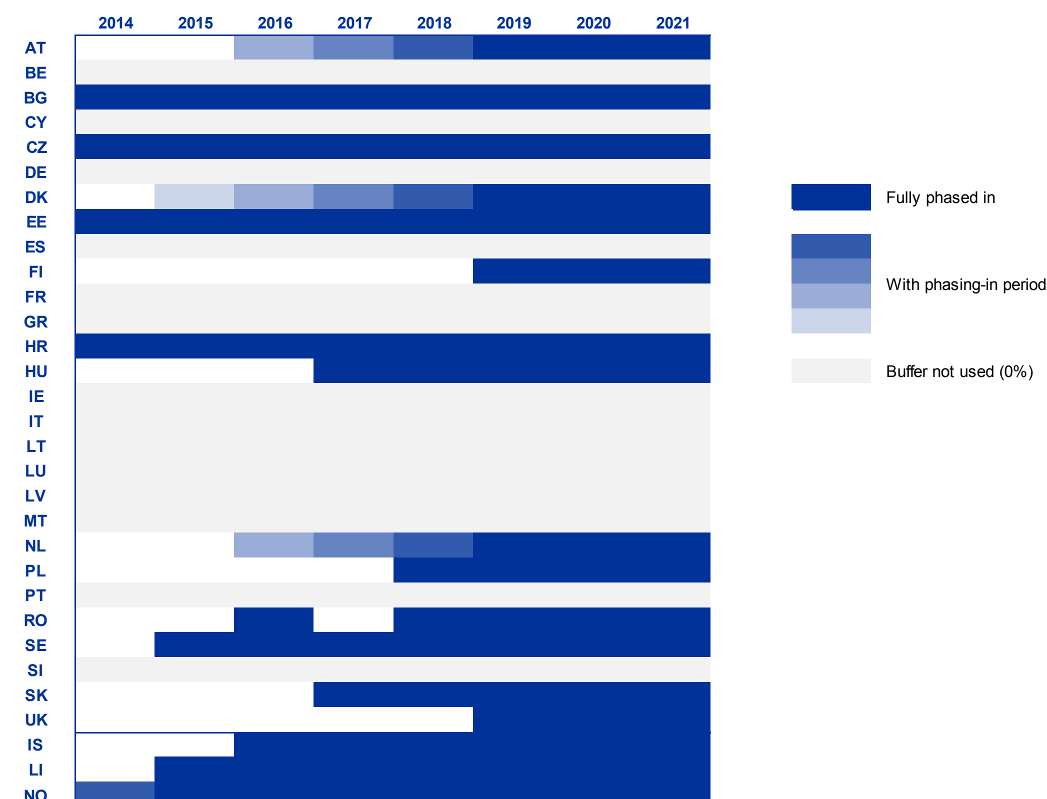
[59] Current amortisation requirements imply the following: (i) mortgages with an LTV between 50% and 70% must be amortised by at least 1% per year; and (ii) mortgages with an LTV above 70% must be amortised by at least 2% per year.

2.6 Use of the systemic risk buffer

The systemic risk buffer is increasingly used among EEA Member States. In all Member States, with the exception of Ireland and Italy, this instrument is now potentially available for use by the macroprudential authority. By the end of 2018, a SyRB was active or had been announced in 16 countries (see Chart 10).[60] Finland was the only Member State to activate a new SyRB in 2018, but several other countries recalibrated the rates already applied throughout the year.

Chart 10

Phasing-in of the systemic risk buffer in Europe



Source: ESRB.

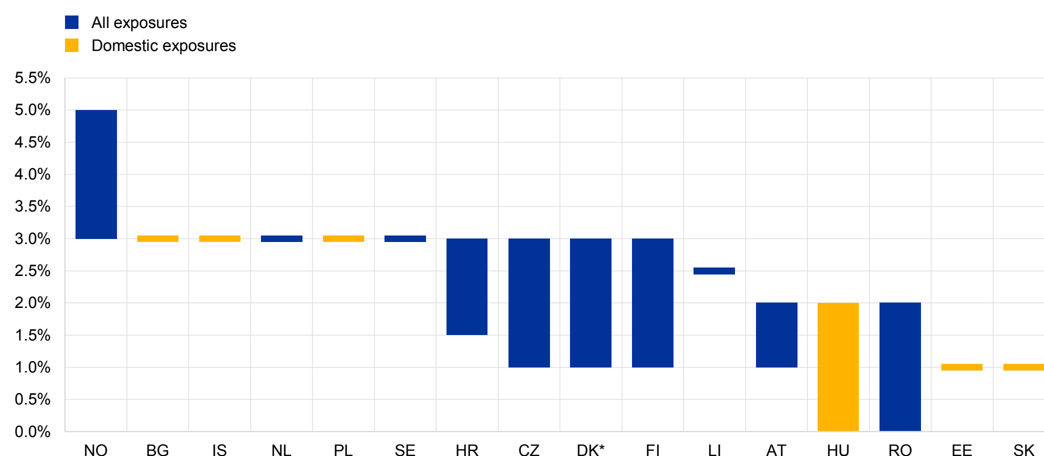
Notes: In Romania, a 1% SyRB was applied in March 2016 to all banks with a parent bank based in a non-investment-grade country in order to avoid contagion risk resulting from ownership structure. The instrument was suspended in June 2016 and deactivated from March 2017 onwards. Slovakia initially had a phase-in spanning 2017 and 2018, but later revised the 2018 levels to equal those of 2017. The United Kingdom has legislated for the SyRB to be implemented in 2019. The Prudential Regulation Authority has said that it will announce specific rates in early 2019 with application three months after the date of announcement. In Denmark, a general SyRB for the Faeroes will be phased in to a level of 3% in 2020 (4.5% and 5% for the O-SIIs in the Faeroes depending on their systemic importance). If the buffer of only one bank was not fully phased-in, this is not reflected in this chart.

The implementation of this instrument varies widely across countries. Chart 11 and Table 6 illustrate the different arrangements EEA Member States have been following in terms of buffer size, scope (all banks or a selection of banks, all exposures or domestic exposures, solo or consolidated), type of risk being addressed (e.g. macroeconomic imbalances, external risks, banking system features, real estate risk, NPL risk, systemic risk resulting from O-SIIs) and phase-in periods (with or without).

[60] 13 Member States – Austria, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, Hungary, Netherlands, Poland, Romania, Slovakia and Sweden – as well as Iceland, Liechtenstein and Norway.

Chart 11
The range of the fully phased-in SyRB rates in Europe

(level as a percentage)



Source: ESRB.
Notes: The chart depicts the range of the fully phased-in SyRB rates by country, regardless of whether or not it is already fully phased-in or not. (*) For Denmark, the SyRB applied in the Faeroes is not taken into account.

In the course of 2018 the following countries introduced changes to or updated the systemic risk buffer:

- **In Austria,** the Austrian Financial Market Authority decided that a SyRB of up to 2% should be maintained.[61] Keeping the buffer rates constant was justified because the structural risks for the Austrian banking system have largely remained unchanged since the previous year's assessment. Given that systemic risks may manifest themselves both at the consolidated and the unconsolidated level and that, particularly within cross-border banking groups, capital allocation in crises would not be flexible, the SyRB was maintained also at the unconsolidated level.
- **In the Czech Republic,** Česká národní banka, under its two-year evaluation period, decided to leave the systemic risk buffer rates unchanged between 1% and 3%.[62] The rates apply to all exposures of five selected institutions.
- **In Denmark,** the Minister for Industry, Business and Financial Affairs decided in June 2018 to increase the general SyRB rate for exposures in the Faeroes from 1% to 2% from January 2019 and to 3% from January 2020.[63] The increase in the systemic risk buffer follows the April 2018 recommendation from the Systemic Risk Council and the Faeroese Home Rule also supported the increase of the systemic risk buffer. The general SyRB was first activated in the Faeroes in January 2018 and applies only to exposures on the Faeroes and is reviewed every year.[64]

[61] See **Notification by the Austrian Financial Market Authority on maintaining the existing systemic risk buffer**, December 2018.

[62] See **Notification by Česká národní banka (Czech National Bank) on maintaining the existing systemic risk buffer, July 2018**, July 2018.

[63] See **Notification by the Danish Ministry of Industry, Business and Financial Affairs on a change in the level of an existing systemic risk buffer in the Faroe Islands**, June 2018.

[64] As regards systemically important financial institutions (SIFIs), the general systemic risk buffer rate will be an add-on to the SIFI requirements, which are fully phased-in in 2019.

- **In Estonia,** Eesti Pank, under its two-year evaluation period, decided in April 2018 to maintain the SyRB rate at 1% for domestic exposures of all credit institutions authorised in Estonia.[65] The SyRB was first introduced in April 2014 (to be applied from August 2014), with a recalibrated rate being applied from August 2016 onwards, aiming to address the long-term non-cyclical systemic risk stemming from the structural characteristics of the Estonian economy. The ESRB recommended reciprocation of the Estonian SyRB in 2016, and in 2018 Eesti Pank reset the institution-specific materiality threshold for reciprocity (see also Section 2.9.4.1). This implied that Croatia, which had reciprocated the measure with a materiality threshold of 2% of total risk-weighted credit exposures in 2017, no longer fulfilled all the criteria to be considered as reciprocating.

- **In Finland,** the Finnish Financial Supervisory Authority decided to activate a new SyRB to be implemented as of 1 July 2019 without a phase-in period (see Chart 10).[66,67] The new SyRB covers all credit institutions authorised in Finland and is set at a 1.0% rate. In addition, institution-specific rates are applied to three credit institutions at a consolidated level.[68] The decision to activate the buffer was taken against the background of an identified threat to the stability of the Finnish financial system resulting from a set of indicator-based risk levels (in relation to historical Finnish data and in comparison with other EU Member States and euro area countries).[69]

- **In Hungary,** the Magyar Nemzeti Bank conducted its annual revision of the effective SyRB rates.[70] As a result, only one bank will be obliged to maintain a SyRB of 1%.[71] The SyRB was first introduced in July 2017 in order to adequately manage risks arising from “problem CRE project loans”.[72] The decision applies from 1 July 2018 onwards, until the next annual revision takes place.

- **In the Netherlands,** De Nederlandsche Bank (DNB) within its annual O-SII review decided to maintain the SyRB at 3%.[73] In 2015, DNB identified five systemically important institutions, of which three of them were required to hold an additional buffer of 3% of risk-weighted assets.

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65 See **Notification by Eesti Pank on the systemic risk buffer**, April 2018.

66 See **Notification by FIN-FSA (the Finnish Financial Supervisory Authority) on the systemic risk buffer**, July 2018.

67 In 2017 Finland made the necessary legal changes to add the SyRB to the macroprudential toolbox.

68 The SRB amounts to 3.0% for Nordea Group, 2.0% for OP Group and 1.5% for Municipality Finance Plc.

69 The Act on Credit Institutions, chapter 10, section 6a, specifies the criteria for the application of the SyRB. These provisions are supported by the Ministry of Finance Decree 65/2018, which in turn specifies the indicators applicable for the assessment of systemic risk.

70 See **Notification by the Magyar Nemzeti Bank of Hungary on the systemic risk buffer**, June 2018.

71 Based on data as at 31 March 2018, only one bank – CIB Bank Zrt. – is above the 30% threshold having problem exposures exceeding the HUF 5 billion de minimis limit. Thus, CIB Bank Zrt. will be obliged to maintain a SyRB of 1% to the domestic RWAs from 1 July 2018 compared with the 2% SyRB rate effective from 1 July 2017 until 30 June 2018. The Raiffeisen Bank Zrt. will be obliged to maintain a SyRB of 0% to the domestic RWAs from 1 July 2018 compared with a 1.5% SyRB rate effective from 1 July 2017 to 30 June 2018.

72 In October 2015, the Magyar Nemzeti Bank’s (MNB) Financial Stability Board decided to implement the SyRB in order to adequately manage risks arising from “problem CRE project loans”. Banks were expected to comply with the enhanced capital requirements from January 2017. The MNB postponed further the introduction of the SyRB to 1 July 2017 to ensure reasonable room for the completion of portfolio sales under way.

73 See **Notification by De Nederlandsche Bank (Central Bank of the Netherlands) on the systemic risk buffer and on five other systemically important institutions (O-SIIs)**, January 2019.

- **In Romania,** from June 2018, a new SyRB applies to all exposures of institutions, with rates set at 0%, 1% or 2% according to the institution's NPL ratio and coverage ratio.[74,75] In September 2018, the National Committee for Macroprudential Oversight conducted the first biannual recalibration of the SyRB, to be applied from January 2019.[76] The biannual reassessment is intended to support the balance sheet clean-up process, to monitor the real-time progress of the non-performing loans and to tackle any potential re-emergence of NPLs.

- **In Iceland,** the Financial Supervisory Authority, under its two-year evaluation period, decided in May 2018 to maintain the existing SyRB rates for O-SIIs but to increase the rate for other institutions. The rate of the systemic risk buffer will therefore remain 3% of deposit-taking institutions' domestic exposures. However, the rate of the systemic risk buffer for non-systemically important financial institutions, currently 2%, shall rise to 3% as of 1 January 2020. In addition, the capital buffer requirements shall continue to be maintained on a consolidated basis.[77] The SyRB was first introduced in April 2016 aiming to address the elevated credit risk arising from the inherent structural vulnerabilities of the Icelandic economy, namely being a small open economy with its own currency sensitive to developments in the global economy.

- **In Sweden,** Finansinspektionen decided in November 2018 to maintain the current SyRB rate at 3%.[78] Finansinspektionen has reviewed the arguments originally set out to support a SyRB buffer level of 3% at the consolidated level for the major banking groups and concluded that the arguments are still valid for the three remaining major banking groups, following Nordea's change of domicile.

- **In Slovakia,** Národná banka Slovenska, within its annual review of SyRB rates, decided to maintain the SyRB rate at 1% for domestic exposures of three selected O-SIIs.[79] The SyRB was first introduced in 2017, with a phase-in period, aiming to address structural risks related to the importance of the banking sector in the Slovak financial system, its high concentration and the external risk derived from Slovakia being a small and open economy. The decision to maintain the rates applies from 1 January 2019 onwards.

- **In Liechtenstein,** the Financial Market Authority decided to keep the SyRB unchanged, amounting to 2.5% of total risk-weighted assets for systemically important institutions.[80]

[74] See **Notification by Banca Naţională a României (National Bank of Romania) on the systemic risk buffer**, April 2018.

[75] According to the 12-month average of the NPL ratio and the coverage ratio with provisions, reported by each individual credit institution.

[76] See **Notification by the National Committee for Macroprudential Oversight of Romania on the systemic risk buffer**, September 2018.

[77] See **Notification by the Financial Supervisory Authority of Iceland on the systemic risk buffer**, May 2018.

[78] See the **Biennial Review of the Systemic Risk Buffer** on Finansinspektionen's website, 13 November 2018, Stockholm.

[79] See **Notification by Národná banka Slovenska (National Bank of Slovakia) on the systemic risk buffer**, June 2018.

[80] See **Notification by the Financial Market Authority of Liechtenstein on the systemic risk buffer**, November 2018.

Table 6
Main features of the systemic risk buffer in Europe

(situation on the basis of decisions approved until end 2018, level refers to fully phased-in buffers)

Country	Level	Calculation basis	Main motivation	(First) implementation	Last review
AT	1% or 2%	Thirteen banks[81] All exposures (Sub-)consolidated	Systemic vulnerability Systemic cluster risk	2016 (phase-in period) 2019 (fully phased in)[82]	2018
BG	3%	All banks Domestic exposures Individual, solo and (sub-)consolidated	Presence of currency board, impact of monetary and fiscal policy, and to improve resilience of banking sector.	2014	2017
CZ	1%, 2% or 3%	Five banks identified as O-SIIs[83] All exposures Solo level	Systemic risk resulting from highly concentrated banking sector and common sectoral exposures.	2014	2018
DK	1%, 1.5%, 2%, 2.5% or 3%	Six banks identified as O-SIIs[84] All exposures Solo and (sub-)consolidated	Systemic risk resulting from O-SIIs	2015 (phase-in period) 2019 (fully phased in)	2017
	3%, 4.5% or 5%	All banks domiciled in the Faeroes Domestic exposures to the Faeroes Three banks identified as O-SIIs	A general part addressing structural vulnerabilities characterising the Faeroese economy and financial sector applies to all banks. In addition, three systemically important institutions have an add-on due to systemic risk resulting from O-SIIs.	2018 (H1)	2018 (H2) (fully phased in by 2020)
EE	1%	All banks Domestic exposures Solo and (sub-)consolidated	Structural vulnerabilities: a small and open economy, high concentration of banks' loan portfolios, modest financial buffers of households.	2014	2018
FI	1%, 1.5%, 2% or 3%	Three banks identified as O-SIIs[85] and all other banks operating in Finland All exposures	Systemic risk resulting from a comparison of the conditions in the Finnish market in relation to other EU countries and in relation to Finnish historical data.	2019	
HR	1.5% or 3%	All banks All exposures Solo and (sub-)consolidated	Systemic risk resulting from O-SIIs, macroeconomic imbalances, features of real estate markets, the role of real estate as collateral and high concentration in the banking sector.	2014	2017
HU	0%, 1%, 1.5% or 2%	All banks[86] Domestic exposures (Sub-)consolidated	Systemic risk resulting from problem exposures to the CRE sector (non-performing project loans and held-for-sale CRE). Buffer rate depends on the ratio of the bank's problem CRE exposures to its capital	2017	2018

[81] 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.

[82] For Volksbanken Verbund the phase-in only ends in 2020.

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

[84] 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.

[85] Nordea Group, OP Group, Municipality Finance Plc.

[86] During the last review of the Hungarian SyRB in 2018, only one bank (CIB Bank Zrt.) was found to have problem exposures exceeding the HUF 5 billion threshold

NL	3%	Three largest banks[87] All exposures Consolidated	Systemic risk resulting from SIIs	2016 (phase-in period) 2019 (fully phased in)	2018
PL	3%	All banks Domestic exposures Individual and consolidated	Heightened uncertainty due to external factors.	2018	
RO[88]	0%, 1% or 2%	24 banks identified based on the level of the NPL ratio and the coverage ratio[89] All exposures Solo and (sub-)consolidated	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.	2018 (H1)	2018 (H2)
SE	3%	Four largest banks[90] All exposures Consolidated	Systemic risk resulting from SIIs and features of the banking sector: similarity of business models, high common exposures, high interconnectedness, high concentration.	2015	2018
SK	1%	Three of the banks identified as O-SIIs[91] Domestic exposures Solo and (sub-)consolidated	Importance of the banking sector, high concentration in the banking sector, structural vulnerabilities of a small open economy.	2017 (phase-in period) 2018 (fully phased in)[92]	2018
IS	3%	All banks Domestic exposures Consolidated	Structural vulnerabilities of a small open economy.	2016 (fully phased in for O-SIIs, four year phase-in for others)	2018
LI	2.5%	Three banks identified as O-SIIs[93] All exposures Solo and consolidated level	Structural vulnerabilities of a small open economy, amplified by the importance and concentration of the banking sector.	2015	2018
NO	3%	All banks All exposures Solo and (sub-)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 – 2014	
	2%	Two banks identified as O-SIIs[94] All exposures Solo and (sub-)consolidated	In addition to the 3% SyRB for all banks; systemic risk resulting from SIIs.	2016	2018

Source: ESRB.
Notes: In the United Kingdom, the Financial Policy Committee (FPC) published its framework for the systemic risk buffer. As part of the legislative package implementing the recommendations of the Independent Commission on Banking, the FPC is required to produce a framework for a systemic risk buffer for ring-fenced banks and large building societies. The systemic risk buffer will be applied to individual institutions by the Prudential Regulation Authority (PRA) and is scheduled to be introduced shortly after ring-fencing comes into force in 2019..

[87] ABN Amro Bank, ING Bank, Rabobank.

[88] Between 2016 and 2017 a 1% SyRB was applied to all banks with a parent bank based in a non-investment-grade country in order to avoid contagion risk resulting from ownership structure, but was deactivates from 1 March 2017 onwards.

[89] 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.

[90] Handelsbanken, Nordea, SEB, Swedbank.

[91] Všeobecná úverová banka, Slovenská sporiteľňa, Tatra banka.

[92] The initially planned phase-in for 2018 was later revised downwards to equal the 2017 levels.

[93] LGT Group Foundation, LLB Group, VP Bank Group (consolidated) and their subsidiaries (solo).

[94] DNB ASA and Kommunalbanken AS

2.7 Capital buffers for systemically important institutions

Compared with 2017, the annual O-SII identification exercise[95] resulted in changes to the list of O-SIIs or O-SII buffer rates in 17 Member States. In total, 198 SIIs have been identified by designated authorities in the EU, Norway, Iceland and Liechtenstein, four fewer than in the previous year. The number of SIIs range from 15 in the United Kingdom to two in Norway (see Chart 12). Only Cyprus has identified five investment firms as O-SIIs, all other SIIs are credit institutions. The list of identified SIIs changed in 15 Member States (see Chart 12 and Table 7), one more than in 2017. These changes are often the result of corporate restructurings (mergers or changes of subsidiaries to branches) or of changes in the systemic risk score of institutions or in the methodology for setting the O-SII buffers.

In 2018, the number of EU-based G-SIIs decreased again by one institution to 11 institutions. After being removed from the list in 2017, Groupe BPCE was added back to the list of G-SIIs in 2018. Two other institutions, Nordea and Royal Bank of Scotland, were removed from the G-SII list, but continued to be identified as O-SIIs by their national designated authorities. It should be stressed that the identification was based on end-2017 data and, therefore, the removal of Nordea from the list is not connected to the change of its headquarters from Sweden to Finland on 1 October 2018. All 11 EU-based G-SIIs are located in the five largest Member States (DE, ES, FR, IT, UK) and in the Netherlands. All G-SIIs have also been identified as O-SIIs in their home markets.

In six Member States the national designated authorities also amended the methodology to identify O-SIIs or set the O-SII buffer (see Chart 2). The change in the methodology used in Sweden and Finland was induced by the move of Nordea (see Box 4 for a detailed description). Austria introduced an additional indicator – deposits guaranteed under a deposit guarantee system – into its identification framework.[96] Furthermore, O-SIIs are no longer identified only at a consolidated level, but also at a solo level. All current O-SIIs, which are consolidated banking groups, have been identified as O-SIIs also at a solo level. Three new institutions (Volksbank Wien AG on a consolidated basis, and Erste Bank der oesterreichischen Sparkassen AG and Raiffeisenlandesbank Niederösterreich-Wien on an individual basis) were identified as O-SIIs. The Financial and Capital Market Commission of Latvia decided not to identify two institutions[97] as O-SIIs, which the methodology indicated to be identified due to significant structural changes in the Latvian financial sector in 2018. Following the withdrawal of the licence of ABLV Bank,[98] and due to the decline in assets of the banks serving foreign clients, the size of the Latvian banking sector has significantly decreased from 105% to 75% of GDP, which resulted in the increase of O-SII scores of all remaining credit institutions. In addition, the O-SII score of these two banks was driven by the outstanding debt securities indicator; however, the issuance of debt securities is very limited in the Latvian financial sector. Finally, Lietuvos bankas decided to exclude the debt securities outstanding indicator from the O-SII identification methodology due to the negligible share of securities issued in the banking sector's liabilities, which distorted the results.

[95] According to Articles 131(6)(b) and 131(12) of the CRD IV, designated authorities should review the identification of the O-SIIs and G-SIIs and the corresponding buffer rates at least annually.

[96] The indicator is included in the list of optional indicators in the EBA Guideline EBA/GL/2014/10 of 16 December 2014 on the criteria to determine the conditions of application of Article 131(3) of Directive 2013/36/EU (CRD) in relation to the assessment of other systemically important institutions.

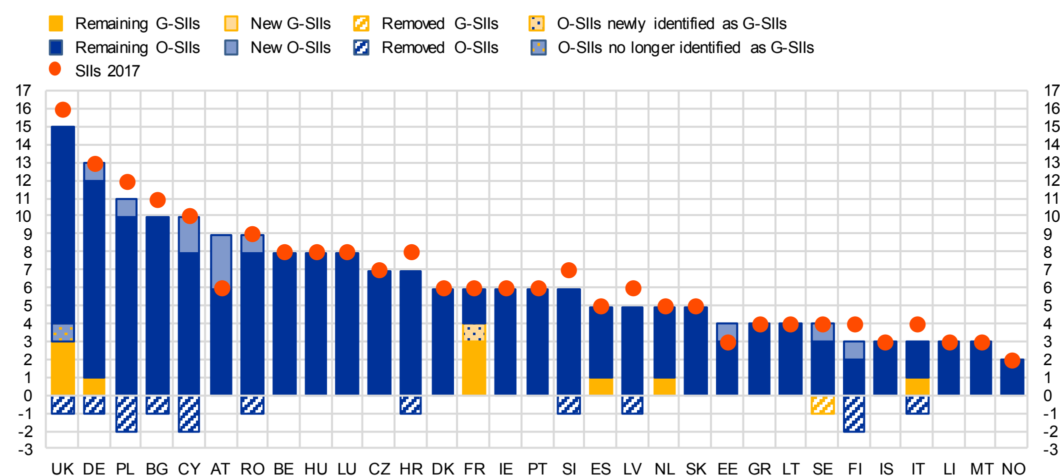
[97] AS BlueOrange Bank and AS "NORVIK BANKA"

[98] ABLV Bank was identified as an O-SII in 2017 with the highest O-SII score in the Latvian banking sector.

Chart 12

Number of systemically important institutions by EEA Member State

(number of institutions as notified to the ESRB)



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, in the 2018 sample all G-SIIs were also classified as O-SIIs. Additions and removals always distinguish between individual institutions to avoid double-counting. When an O-SII is newly identified or no longer identified as a G-SII, it is shifted in between the two coloured bars with the dots indicating the previous status. The removals result either from the fact that an institution previously identified as an O-SII or G-SII was not identified as an O-SII or G-SII in 2017 due to the decrease of its relative significance, due to its acquisition or merger with another institution, or due to liquidation or resolution. The SII classifications and changes thereto are based on the notifications the ESRB received pertaining to the 2018 and 2017 identification exercises, the changes shown result from comparing the two regardless of the date of application. The G-SII/O-SII identifications are to take effect immediately or in the near future.

Table 7

Changes in the SII lists and/or SII buffer levels notified in 2018 compared with the 2017 lists and buffer levels

Member State	Changes
Austria	• Addition of three institutions to the O-SII list
Bulgaria	• Removal of one institution from the O-SII list due to a local merger • Increase of the fully phased-in buffer for the merged institution and one other institution
Cyprus	• Addition of two institutions to the O-SII list and removal of two institutions from the O-SII list • Increase of the fully phased-in buffer for two institutions and decrease of the fully phased-in buffer for one institution
Croatia	• Removal of one institution from the O-SII list
Estonia	• Addition of one institution to the O-SII list • Increase of the fully phased-in buffer for one institution
Finland	• Replacement of one institution on the O-SII list due to a move and removal of one institution from the O-SII list • Decrease of the fully phased-in buffer for one institution
France	• Addition of one institution to the G-SII list
Germany	• Addition of one institution to the O-SII list and removal of one institution from the O-SII list • Postponement of the fully phased-in buffer for one institution by one year
Ireland	• Replacement of one institution on the O-SII list by its parent
Italy	• Removal of one institution from the O-SII list
Latvia	• Removal of one institution from the O-SII list • Decrease of the fully phased-in buffer for two institutions
Lithuania	• Increase of the fully phased-in buffer for one institution
Poland	• Increase of the fully phased-in buffer for two institutions and decrease of the fully phased-in buffer for one institution • Addition of one institution to the O-SII list and removal of two institutions from the O-SII list
Romania	• Increase of the fully phased-in buffer for four institutions • Addition of one institution to the O-SII list and removal of one institution from the O-SII list
Slovenia	• Increase of the fully phased-in buffer for one institution • Removal of one institution from the O-SII list
Sweden	• Removal of one institution from the G-SII and O-SII list and addition of one institution to the O-SII list
United Kingdom	• Replacement of two institutions on the O-SII list due to rebranding or restructuring, removal of one institution from the G-SII list and removal of one institution from the O-SII list

Source: ESRB.
Notes: Changes in buffer levels resulting from phasing-in arrangements are not included. No changes were observed in Belgium, the Czech Republic, Denmark, Greece, Hungary, Luxembourg, Malta, the Netherlands, Portugal and Slovakia. The SII classification is based on the notifications the ESRB received pertaining to the 2018 and 2017 identification exercises, the changes shown result from comparing the two 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 they are classified as credit institutions or investment firms.

Box 4 – Changes in the O-SII frameworks in Sweden and Finland induced by the move of Nordea[99]

The change of Nordea's headquarters from Sweden to Finland on 1 October 2018 led to some changes in the O-SII frameworks of both countries. According to the EBA Guidelines[100], authorities should assess the institutions at the highest consolidation level in the first step of their scoring methodology. The reference point is the domestic economy. Home authorities should assess banks at the consolidated group level, while host authorities should assess subsidiaries in their jurisdictions at a (sub-)consolidated level to include any of their own downstream subsidiaries. In further steps, authorities may choose to apply a narrower scope of consolidation where appropriate. Consequently, prior to the move, Nordea's worldwide consolidated balance sheet was used to calculate O-SII scores in Sweden, while in Finland only the sub-consolidated situation was considered. After the move, the situation is vice versa.

In Sweden, the O-SII scores of other O-SIIs increased substantially.[101] Nordea was the most important bank in Sweden in 2017 with an O-SII score of 4200, followed by Skandinaviska Enskilda Banken (1574), Svenska Handelsbanken (1436), and Swedbank (1150). After the move, the O-SII scores of these three banks increased to 2984, 2521 and 2060 respectively. Nonetheless, buffer requirements remained the same for these banks, as Finansinspektionen applies a 3% SyRB and an additional 2% Pillar 2 requirement for the SII-specific risks of these banks. Nordea's subsidiary Nordea Hypotek AB has also been identified as an O-SII with a score of 401 and Nordea's branch in Sweden has an O-SII score of 547. However, Finansinspektionen applied a 0% O-SII buffer rate to Nordea Hypotek AB given that Finnish authorities decided to apply an O-SII buffer to its parent Nordea Bank Abp.

In Finland, an adjustment to the O-SII framework was needed to mitigate the dominance of Nordea. After the move, Nordea's O-SII score in Finland jumped to 7519 from the 589 assigned to Nordea Mortgage Bank Plc in 2017. Consequently, the O-SII scores of the other two Finnish O-SIIs, OP Group and Municipality Finance Plc, decreased from 2396 and 872 in 2017 to 986 and 323. The Finnish FSA decided to lower the threshold for O-SII identification from 350 to 275 according to the EBA Guideline. In addition, the optional assets-to-GDP indicator was used when calibrating the O-SII buffers and new thresholds for O-SII buffers were calibrated. As a result, the 2% O-SII buffer requirement for OP group is maintained, and the O-SII buffer for Municipality Finance plc decreased from 1% to 0.5%. Nordea is subject to a 2% O-SII buffer and a 3% SyRB, of which the higher applies at the highest level of consolidation.

[99] Prepared by Ľuboš Šesták (ESRB Secretariat).

[100] See **EBA/GL/2014/10** of 16 December 2014 on the criteria to determine the conditions of application of Article 131(3) of **Directive 2013/36/EU** (CRD) in relation to the assessment of other systemically important institutions.

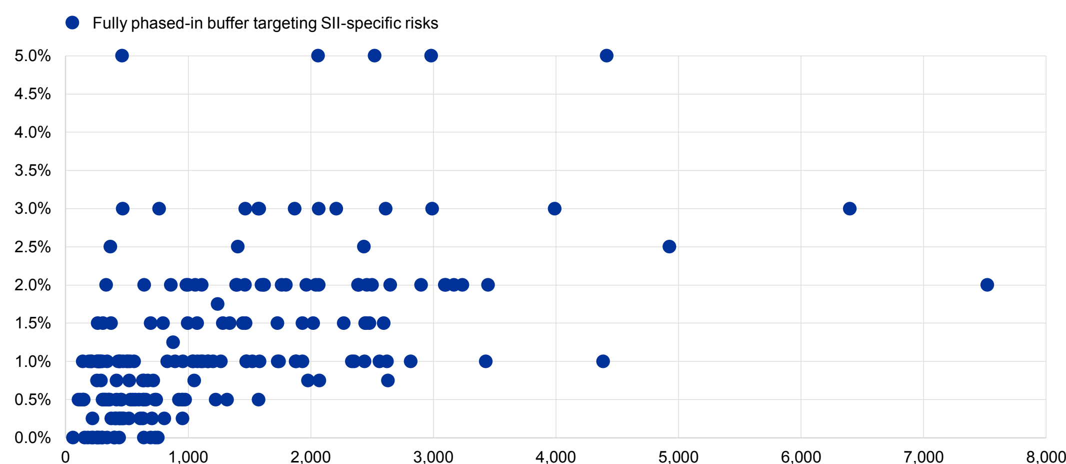
[101] According to the EBA Guideline, the O-SII scores are calculated on a relative basis in relation to the domestic banking sector.

Some heterogeneity in the calibration of the O-SII buffer across countries continues, which could be only partly explained by the differences in bank significance (see Chart 13). There are several reasons which could explain some of the differences in the O-SII buffer calibration across countries. First, the O-SII score is calculated with reference to the domestic economy. Therefore, a given O-SII score has a different relevance in a highly concentrated banking system than in a fragmented one. Second, Member States use a different methodology to calibrate the O-SII buffer rates leading to fundamental differences in buffer levels. On the other hand, legal restrictions on the level of the O-SII buffer limit the possibilities for cross-country heterogeneity. Nonetheless, they might prevent some Member States from setting the O-SII buffer at the desired level and thus may leave some systemic risk unaddressed. Authorities in some of these countries use other instruments to reach the target buffer level for O-SIIs (see Section 2.6). Possible measures to tackle risks stemming from SIIs are the O-SII buffer, the G-SII buffer, the SyRB and Pillar 2 measures. These are included in, what in this publication is defined as, the buffer targeting SII-specific risks if the national designated authority publicly stated that such measures are being used to target these risks.[102]

Chart 13

Relationship between the O-SII score and the fully phased-in buffer targeting SII-specific risks

(y-axis: buffer in percentages, x-axis: O-SII score in basis points)



Source: ESRB.
Notes: Data are based on notifications received in 2018. The buffer targeting SII-specific risks 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 these risks. The O-SII/G-SII buffer is cumulated with the SyRB according to the CRD IV provisions.

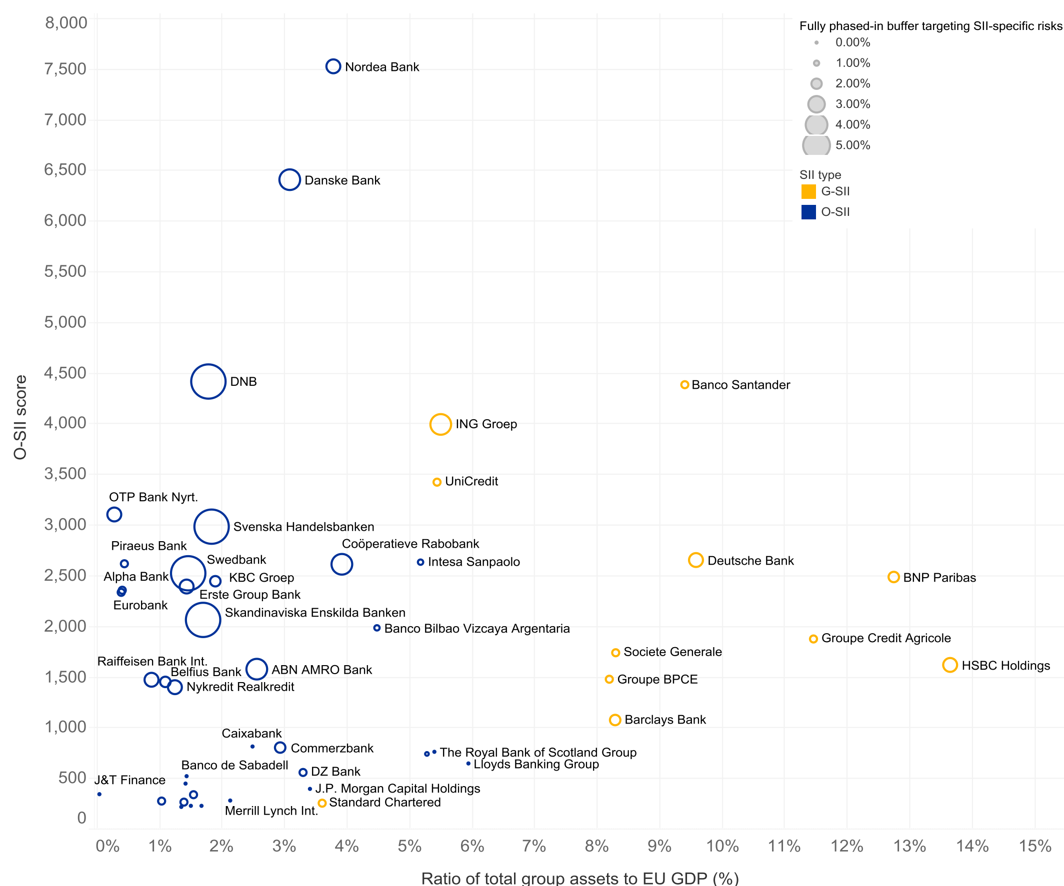
Significant differences in the O-SII buffer rates pertain also to the EU cross-border groups identified in Annex 4 (see Chart 14). Such differences are observed both in relation to their O-SII score as well as to their total assets relative to the EU's GDP. While differences can be justified for individual domestic O-SIIs, there is less reason why O-SII buffers for large EU cross-border groups should vary substantially. One argument could be that cross-border groups can have a substantial presence in a particular country or region which would justify their higher O-SII buffer requirement. Another reason could be that a group has systemically important branches in other Member States. However, it is not clear to what extent the designated authority in the home Member State of a group takes the systemic presence of the group into consideration when setting the O-SII buffer.

[102] The O-SII/G-SII buffer and SyRB are cumulated in accordance with CRD IV provisions. For a more detailed discussion, see Special Feature C in the **Review of Macroprudential Policy in the EU in 2017**, ESRB, Frankfurt am Main, April 2018.

Chart 14

Relationship between the size of O-SII groups and their fully phased-in buffer targeting SII-specific risks

(y-axis: O-SII score in basis points, x-axis: ratio of total group assets to EU GDP as a percentage)



Sources: ECB, ESRB and Standard and Poor's Global Market Intelligence (formerly SNL) data and ESRB calculations.
Notes: The chart includes all the banking groups listed in Annex 4 and banking groups which have total assets amounting to more than 1% of EU GDP. Data are based on notifications received in 2018 and total assets and GDP figures for 2017. The size of the bubbles represents the level of the fully phased-in buffer targeting SII-specific risks. This buffer 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 these risks. The O-SII/G-SII buffer is cumulated with the SyRB according to the CRD IV provisions.

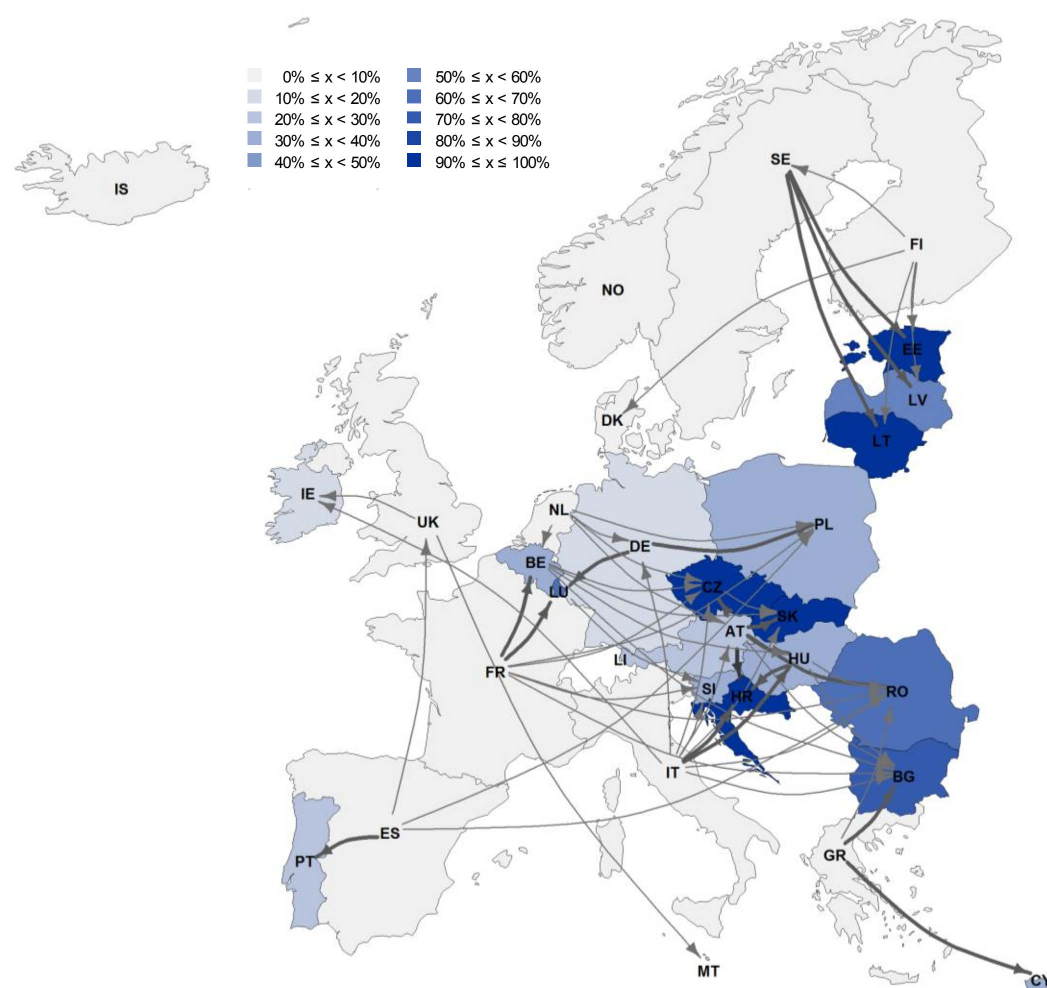
The forthcoming changes to the CRD have the potential to reduce overlaps between instruments and reduce heterogeneity in the O-SII buffer calibration in line with the ESRB proposals (see Special Feature C). The forthcoming changes to the CRD are in line with the ESRB's 2017 proposals.[103] The increased O-SII buffer cap of 3% with the possibility for designated authorities to impose buffers higher than 3%, subject to approval from the European Commission, and the increased O-SII buffer cap on subsidiaries of EU parent institutions will allow authorities to use the dedicated instrument to fully cover this type of risk. Authorities will not be able to use Pillar 2 or the SyRB to target the risks posed by O-SIIs anymore.

[103] See **Final report on the use of structural macroprudential instruments in the EU** and the **Opinion to the European Commission on structural macroprudential buffers** published by the ESRB in December 2017.

Although O-SIIs are identified at the national level, 70 of them are part of a cross-border group where the controlling entity is located in another Member State and mostly also identified as an O-SII or G-SII. Such potential cross-border linkages are illustrated in Chart 15 and Annex 4. Such linkages might be potential transmission channels for risks across borders and need to be monitored from a financial stability perspective. While six institutions belonging to these cross-border groups were not identified as O-SIIs in 2018 any longer, two new subsidiaries were identified as O-SIIs. There are only two O-SIIs which are subsidiaries of a parent that itself has not been identified as an O-SII or a G-SII.[104]

Chart 15

Cross-border links between Member States through the presence of SIIs and their market share in host countries



Sources: ESRB and Standard and Poor's Global Market Intelligence (formerly 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). The Luminor entities operating in the Baltic States are subsidiaries of the Luminor Group AB, based in Sweden, which has not been designated as an O-SII there. Luminor Group is a joint venture Nordea Bank Abp and DNB Bank ASA, with both entities having equal voting rights. Nordea Bank Abp owns 56% of the shares and DNB Bank ASA 44%, but the Luminor Group is not consolidated within the Nordea Group The Société Générale Expressbank (BG) was bought by OTP Bank (HU) from Société Générale (FR) with the merger being completed on 15 January 2019. This merger thus falls outside the scope of this report and this change in ownership structure has therefore not been reflected in this chart.

[104] Addiko Bank (Croatia) and Axa Bank Europe (Belgium).

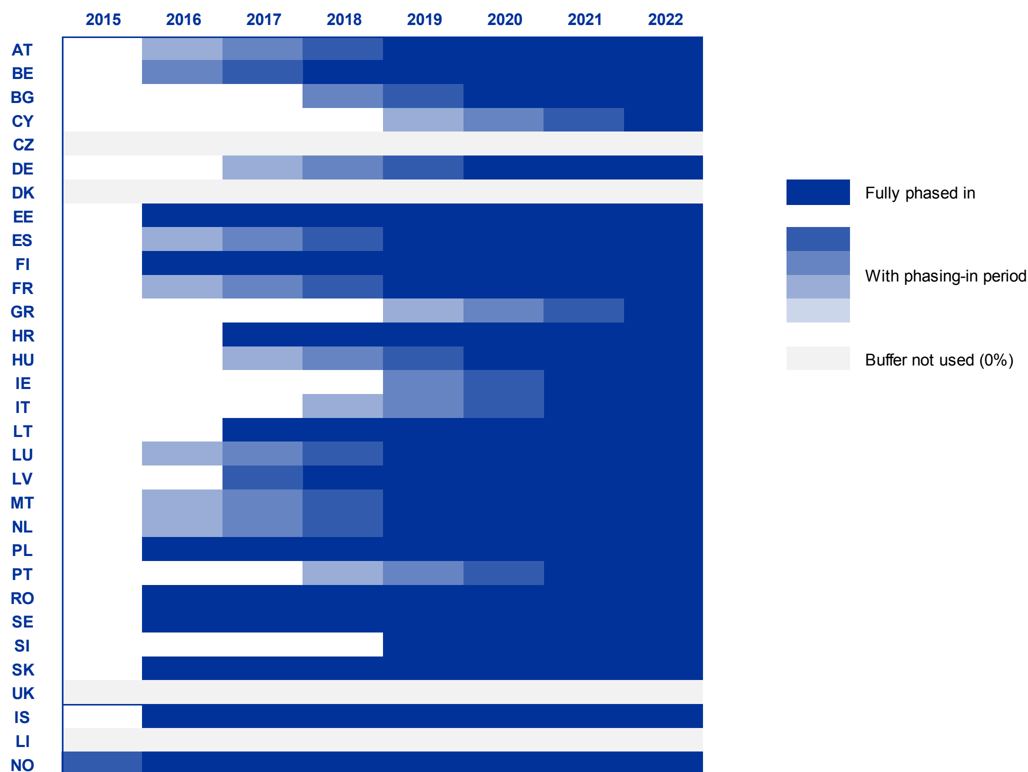
In 2018, 23 cross-border O-SII or G-SII groups were identified, three fewer than in 2017. Danske Bank was no longer included after changing its Finnish O-SII subsidiary into a branch at the end of 2017. Banco Comercial Português was dropped from the list as its subsidiary Bank Millennium SA was not identified as an O-SII in Poland this year. Sberbank Europe was dropped from the list as none of its subsidiaries is identified as an O-SII any more in the EU. While Unicredit controls nine O-SII subsidiaries, other groups control one to six O-SII subsidiaries. Groups with a stronger O-SII presence in other Member States include Raiffeisen (six O-SII subsidiaries), Erste (five), Nordea (five) and Société Générale (five). Six groups control only a single O-SII subsidiary in another Member State.

The geographical patterns of these cross-border interlinkages changed as a result of the relocation of Nordea from Sweden to Finland. Previously, Sweden acted as a hub in the Nordic-Baltic region. After the relocation, this position is now shared between Sweden and Finland. Denmark and Portugal no longer appear as countries where O-SII groups are based. However, in the case of Denmark, this is due to the transformation of its Finnish subsidiary into a branch and not because its activities in Finland decreased. Little has changed with regard to O-SII or G-SII groups in other Member States, which continue to be based in 13 Member States. In France, Spain, Italy, Greece, the Netherlands, Finland and the United Kingdom, the share of foreign-controlled O-SIIs is zero or negligible. While some O-SII groups are based in Austria and Belgium, there is also a strong presence of foreign-controlled O-SIIs in these countries. The share of foreign-controlled O-SIIs increased somewhat in Germany. Finally, in the Baltic region, in central, eastern and south-eastern Europe and in smaller EU Member States, the share of foreign O-SII subsidiaries often exceeds 50% of the domestic banking sector.

While G-SII buffers have been fully phased in since 1 January 2019, O-SII buffers can be phased in taking into account the national situation more flexibly. As can be seen in Chart 16, Belgium and Latvia finished phasing in their O-SII buffers in 2018 and enlarged the set of ten other Member States where O-SII buffers had already been fully phased in. The phasing-in of O-SII buffers started in 2018 in Italy and Portugal too. In Cyprus, Greece and Ireland, the phase-in is expected to start in 2019 and in Slovenia the O-SII buffer should start to apply in 2019 without a phase-in period. Germany extended the phase-in period for one O-SII by one year and introduced a two-year phase-in period for the newly identified O-SII.

Chart 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 CRR/CRD IV into national legislation; for the purposes of this chart, 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. In Germany, only the buffers of two institutions are not fully phased-in, because of a postponement of one year for one institution and because of one newly identified O-SII.

2.8 Other measures

2.8.1 Large exposures

The Haut Conseil de Stabilité Financière (HCSF) adopted a national measure in accordance with Article 458 of the CRR to limit concentration risk in banks' exposures to highly indebted large French non-financial corporations (NFCs). The measure aims to enhance banks' resilience and to reduce the risk of further increases in the debt of the most indebted large French NFCs. The measure limits the large exposures of French systemically important institutions (SIIs) to 5% of their eligible capital for exposures to NFCs or groups of connected NFCs having their registered office in France assessed to be large and highly indebted. An NFC is considered to be large if the original exposure (i.e. pre-application of any conversion factors and risk mitigation techniques) of a SII to this NFC, or group of connected NFCs, equals €300 million or more. An NFC is considered highly indebted if, at its highest level of consolidation, its net leverage ratio[105] is higher than 100% and its financial charges coverage ratio[106] is lower than three. For NFCs whose registered office at the highest level of consolidation is located in France, the large exposure limit applies to the sum of the net exposures towards the whole group of connected clients. For NFCs whose registered office at the highest level of consolidation is located outside France, the large exposure limit applies to the sum of the exposures to NFCs resident in France at the highest level of consolidation, along with the exposures to their economically dependent entities. NFCs that are not resident in France and are not a subsidiary or an economically dependent entity of a French resident NFC are not within the scope of the measure. The measure came into effect on 1 July 2018.

The ESRB issued a positive opinion on the intended measure. As per CRR requirements, the ESRB issued an opinion on the use of Article 458 of the CRR. The ESRB deemed the use of Article 458 of the CRR for the purpose of limiting concentration risk in respect of exposures to highly indebted NFCs as being warranted. The issued opinion took into account that the changes in the intensity of systemic risk are of such a nature as to pose a risk to financial stability at a national level and the measure would not entail disproportionate adverse effects on the whole or parts of the financial system in other Member States.[107]

2.8.2 Liquidity measures

Cyprus imposed tighter lending requirements on institutions so as to prevent a cliff effect following the abolition of national liquidity requirements which were terminated under the CRR at the end of 2017. The measure was based on Article 458 of the CRR and took the form of a liquidity add-on in addition to the fully phased-in liquidity coverage requirement (LCR). Introduced on 1 January 2018 for a duration of 12 months, it was phased out over the course of the year and expired on 31 December 2018. This action was possible through the implementation of a macroprudential liquidity buffer using Article 458 of the CRR.

[105] The ratio between total debt net of cash and equity.

[106] The ratio between, on the one hand, value added, plus operating subsidies less (i) payroll, (ii) operating taxes and duties, (iii) other net ordinary operating expenses excluding net interest and similar charges and (iv) depreciation and amortisation, and, on the other hand, interest and similar charges.

[107] Opinion **ESRB/2018/3** regarding French 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, Frankfurt am Main, 9 March 2018.

The ESRB issued a positive opinion on the intended measure. As per CRR requirements, the ESRB issued an opinion on the use of Article 458 of the CRR, noting that important cliff-edge effects following the transition to the new liquidity regime could pose financial stability risks and so justified the measure.[108]

Hungary introduced a cap on interbank funding to target excessive reliance on non-core funding. Based on data available to the Magyar Nemzeti Bank, the cap will not require adjustment for the overwhelming majority of institutions; however, it is envisaged to act as a barrier to the build-up of excessive reliance on wholesale funding. The interbank funding ratio limits funds from financial corporations, weighted according to currency and residual maturity and divided by the bank's balance sheet total (excluding own funds). The cap is set at 30% and there is a de minimis rule whereby only banks with a balance sheet total of HUF 30 billion or more must comply with the regulation. 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 activation date of the measure was 1 July 2018.

Hungary also adjusted its foreign exchange funding adequacy ratio (FFAR) to align it with the future NSFR requirement. The FFAR has been in place in Hungary since 2012 so as to better match the assets and liabilities of Hungarian credit institutions in foreign currencies. Since then, the currency structure of the balance sheet and funding business model of Hungarian credit institutions has changed following the conversion of foreign currency mortgages. In addition, the European Commission proposed amendments to the CRR in 2016 including the EU implementation of the net stable funding ratio (NSFR) requirement adopted by the Basel Committee on Banking Supervision in 2014.[109] Without altering the required level, the amendment changes the formula for the calculation of the FFAR as some definitions and weights of individual items that are included in the numerator and denominator of the formula were modified. The amended FFAR entered into force on 1 July 2018.

In Slovenia, additional reporting requirements were introduced and a binding measure was changed to a non-binding recommendation. Banks have been required to report daily on their liquidity ratio as of 1 January 2018. The GLTDF (gross loan-to-deposit flows) ratio was implemented in 2014 to prevent drastic reductions in the loan-to-deposit ratio and ultimately lending. The measure required that the GLTDF ratio (annual ratio) did not fall below zero in every reporting quarter. Due to favourable developments, such as the stabilisation of credit activity and the loan-to-deposit ratio, the measure was changed to a non-binding recommendation as of January 2018.

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[108] Opinion **ESRB/2017/5** regarding Cypriot 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, 7 December 2017.

[109] See Commission Proposal for a Regulation of the European Parliament and of the Council amending Regulation (EU) No 575/2013 as regards the leverage ratio, the net stable funding ratio, requirements for own funds and eligible liabilities, counterparty credit risk, market risk, exposures to central counterparties, exposures to collective investment undertakings, large exposures, reporting and disclosure requirements and amending Regulation (EU) No 648/2012 (COM (2016) 850 final) and Basel Committee on Banking Supervision: Basel III: the net stable funding ratio, October 2014.

2.9 Cross-border linkages and reciprocity

This subsection provides an overview of cross-border lending to fund real estate and reciprocity. Against the background of overheating real estate markets in several EU Member States, the first part of this subsection analyses the degree to which cross-border lending is used to fund residential real estate. The remainder of this subsection is dedicated to the reciprocation of national macroprudential measures, most of which target residential real estate.

The information available provides only a limited possibility of assessing cross-border lending, even within the EU. First, some information is consolidated at the credit institution level or at the Member State level and does not distinguish lending provided directly across borders from data provided by branches or subsidiaries of credit institutions in other Member States. Second, a number of macroprudential measures relate to different classifications of exposures than are available in supervisory reporting. For example, the measures adopted under Article 458 of the CRR by Belgium and Finland target exposures secured by real estate located in the activating country, which are not reported in supervisory reporting. Consequently, the charts provided in this section can only provide a proxy of the actual exposures that are relevant for reciprocity purposes. It is important that future reporting requirements also cater to the needs of macroprudential policymakers.

2.9.1 Cross-border residential real estate lending in Europe

This section exploits an EBA dataset available to the ESRB that provides a sectoral breakdown of cross-border loans.[110] This dataset is based on a sample of about 200 large EU banks and provides data for the banking sectors of most, but not all Member States. The data are consolidated at the Member State level, leading to the use of the corresponding mixed definition of cross-border loans in what follows.[111] 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 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, in this subsection, the perspective of the originating country is taken.[112] For the perspective of the receiving Member State, see Section 2.9.3 on reciprocity.

The exposure to residential real estate differs widely across the Member States as does its geographical breakdown (see Chart 17). Exposures to residential real estate vary between 38% of total exposures in Finland to 5% in Slovenia. In most Member States, these exposures are mostly held domestically; in 11 Member States, (almost) exclusively domestically. However, in some Member States, cross-border exposures to residential real estate are significant. In Spain, cross-border exposures (primarily through domestically incorporated subsidiaries) are even larger

[110] The dataset provided by the EBA is composed of 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 PL and RO).

[111] See Subsection 9.1 of the **Review of macroprudential policy in the EU in 2017**, ESRB, Frankfurt am Main, April 2018 for more details.

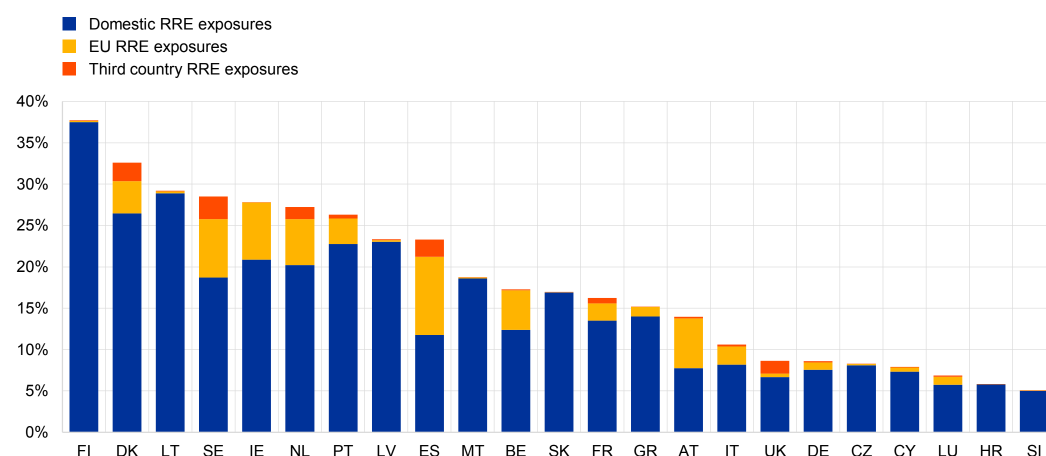
[112] When analysing cross-border loans, two different perspectives can be taken, i.e. that of the originating country and that of the receiving country. The absolute loan amount between two countries does not allow for a sensible interpretation without relating it, for example, to the size of the relative market in the originating and receiving country. In that way, the importance for the two countries can be gauged.

than the domestically held exposures. Most of the cross-border exposures are to other EU Member States. Only in Sweden, Denmark, Spain and the UK are cross-border exposures to third countries larger than 1.5% of total exposures. In sum, despite the large home bias in many EU Member States, cross-border real estate loans can be significant for the originating Member States, providing them with an incentive to reciprocate macroprudential measures that target the respective exposures.[113]

Chart 17

Geographical breakdown of residential real estate exposures as a share of total credit exposures of domestically incorporated banks by EU Member State (Q2 2018)

(percentages)



Sources: EBA (Detailed Risk Analysis Tools) and ESRB calculations.
Notes: Based on a sample of about 200 large banks in the EU. The above chart shows the retail exposures secured by residential real estate measured as original credit exposures. Equity exposures were eliminated from the data series as was "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 chart 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"); and (iii) countries outside the EU ("third countries") as a percentage of total exposures held by domestically owned banks and subsidiaries of foreign parent banks in that Member State in the EBA sample. Exposures to other Member States are only reported 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 only reported by banks that have significant foreign exposures (more than 10% of total exposures).

2.9.2 The ESRB's reciprocity framework

Given the importance of cross-border lending in the EU, the ESRB adopted a framework in December 2015 to promote the greater use of reciprocation.[114] Macroprudential measures taken by Member States generally apply only to domestic banks and subsidiaries of foreign banks

[113] The analysis tends to overstate the importance of reciprocation as the data do not make it possible to distinguish between exposures held by subsidiaries, exposures held by branches and exposures held directly across borders. With respect to capital-based measures, exposures held by subsidiaries are subject to such measures applied in the jurisdiction in which the subsidiary is incorporated. Hence, reciprocation is needed only for exposures held through branches and held directly across borders. Despite the fact that exposures may currently be covered, national authorities may still have an incentive to reciprocate in a forward-looking manner, as otherwise banks may rebook their exposures from a subsidiary into a branch or banks with branches that are growing in significance. With respect to borrower-based measures, many countries apply such measures on an activity basis or at least for all credit institutions (including branches). Hence, reciprocation of borrower-based measures is mostly needed for direct cross-border loans.

[114] See 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 Chapter 11 of the **ESRB Handbook**.

but not usually to branches of foreign banks or to services that are provided directly across borders. Reciprocity therefore extends the application of measures in one Member State to branches of foreign banks and banks providing services directly across borders. The ultimate objective of the reciprocity framework is for the same macroprudential requirements to apply to the same risk exposure in a given Member State, irrespective of the legal status and location of the financial service provider.

At the request of the Member State that activates a macroprudential measure, the ESRB recommends the measure for reciprocation to all other Member States, if this is deemed justified. 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 (the de minimis principle). The ESRB recommends a maximum materiality threshold, and the reciprocating authorities may set a lower threshold or reciprocate with no threshold at all in order to acknowledge reciprocity as a matter of principle.[115] Nevertheless, considering full reciprocity should be the starting point for reciprocating authorities.

The ESRB recommends that countries recognise national macroprudential measures and apply them both to branches located in the activating country and to credit institutions providing direct cross-border services. This issue is highly relevant for national flexibility measures taken under Article 458 of the CRR. Unlike the recognition of the systemic risk buffer under Article 134 of the CRD, Article 458(5) of the CRR does not explicitly refer to the recognition of national flexibility measures for direct cross-border provision of services. However, a broader scope should be considered for reciprocation as it helps to reduce the risk of potential leakages and supervisory arbitrage in the cross-border context (for further details, see Special Feature A).

2.9.3 Measures recommended for reciprocation by the ESRB

The ESRB has recommended reciprocation of the Estonian SyRB and the Belgian, Finnish, French and Swedish national flexibility measures. The measures previously recommended for reciprocation by the ESRB are briefly listed at the beginning of this section. The measures recommended for reciprocation in 2018 are described in more detail in the following subsections.

The ESRB recommended reciprocation of the Estonian SyRB in 2016. Eesti Pank set a SyRB of 1% for domestic exposures of all credit institutions authorised in Estonia in April 2016. In June 2016, the ESRB issued its recommendation to other Member States to reciprocate the measure, motivated by a significant presence of foreign branches in Estonia (mainly from the Nordic countries). An informal institution-specific materiality threshold of €200 million was suggested in 2016 to guide the application of the de minimis principle.[116]

The ESRB recommended an increased materiality threshold of €250 million following the resetting of the SyRB in Estonia in 2018. In April 2018, Eesti Pank reset the SyRB to 1% in line with the two-year evaluation period pursuant to Article 133(10)(b) of the CRD. When resetting the SyRB, Eesti Pank proposed to increase the institution-specific materiality threshold to €250 million (which approximates 1% of total risk-weighted credit exposures) and requested the ESRB to recommend the materiality threshold to other Member States. The ESRB recommended the revised

[115] See 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, 15.12.2017).

[116] The ESRB recommends a maximum materiality threshold since 2017 to limit potential material divergences in the application of the de minimis principle. For further information, see Recommendation **ESRB/2017/4** and Section 9.2 of the **Review of Macroprudential Policy in the EU in 2017**, ESRB, Frankfurt am Main, April 2018.

materiality threshold in January 2019. This implied that Croatia, which had reciprocated the measure with a materiality threshold of 2% of total risk-weighted credit exposures, no longer fulfils all the criteria to be considered as reciprocating.

The ESRB recommended reciprocating the Finnish national flexibility measure under Article 458 of the CRR in January 2018. Finanssivalvonta activated a credit institution-specific average risk weight floor of 15% for IRB credit institutions, at the portfolio level, for residential mortgage loans secured by housing units in Finland in October 2018. The ESRB issued its recommendation to other Member States to reciprocate the measure in January 2018. The ESRB recommended a maximum institution-specific materiality threshold of €1 billion to guide the application of the de minimis principle.

2.9.3.1 Risk weight add-on for residential real estate in Belgium

The Nationale Bank van België/Banque Nationale de Belgique (NBB/BNB) submitted to the ESRB its reciprocation request concerning the national macroprudential measure under Article 458 of the CRR in May 2018. The measure is a risk weight add-on for residential mortgage exposures of credit institutions applying the IRB approach (see Section 2.5). The risk weight add-on has two components:

- **a flat risk weight add-on of 5 percentage points** applied after the proportionate risk weight add-on; and
- **a proportionate risk weight add-on** calculated as a fraction (33%) of the average microprudential risk weight of the bank's portfolio of retail mortgage exposures.

Although foreign branches are very small players in the Belgian mortgage market, Belgian subsidiaries of EU banking groups are very important. According to the structural financial indicators, the total assets of foreign branches located in Belgium amounted to €170 million at the end of 2017. However, the mortgage lending activity of foreign branches is only estimated to be below 1% of the total mortgage market in Belgium. Several Member States have significant exposures to the Belgian RRE sector, most notably France and the Netherlands (see Chart 20). These exposures mainly stem from their subsidiaries in Belgium and direct cross-border lending to the Belgian RRE sector is deemed negligible.

The ESRB deemed the request adequate as a backstop to prevent regulatory arbitrage and issued a recommendation for reciprocation in July 2018.[117] The ESRB recommended applying the Belgian measure to all credit institutions having branches in Belgium or providing direct cross-border services in Belgium. The ESRB recommended a materiality threshold of €2 billion of exposures to the Belgian RRE market (de minimis principle).

Previously, the ESRB recommended reciprocating a former Belgian national macroprudential measure under Article 458 of the CRR in 2016. The measure consisted solely of the flat risk weight add-on of 5 percentage points for residential mortgage exposures of credit institutions applying the IRB approach and expired in May 2017. Originally, the NBB/BNB envisaged that a new measure would replace the former measure in 2017; however, this proposed measure was rejected by the Federal Government of Belgium, which asked the NBB/BNB to

[117] See Recommendation ESRB/2018/5 of the European Systemic Risk Board of 16 July 2018 amending Recommendation ESRB/2015/2 on the assessment of cross-border effects of and voluntary reciprocity for macroprudential policy measures (OJ C 338, 21.9.2018, p. 1).

reassess the vulnerabilities in the residential real estate sector. Finally, the NBB/BNB reassessed the risk in 2017 and a revised measure was approved in 2018.

2.9.3.2 Tighter large exposure limits for NFCs in France

The Haut Conseil de Stabilité Financière (HCSF) submitted its reciprocation request concerning the national macroprudential measure based on Article 458 of the CRR to the ESRB in May 2018. The measure tightens the large exposure limit of French systemically important institutions for highly indebted large NFCs with their registered office in France to 5% (see Section 2.8.1 for a more detailed description of the measure).

Foreign branches and direct cross-border lending have a significant share in the market including non-EU institutions. Lending by French banks to French NFCs is dominated by the six French SIIs. Based on data from COREP and the EBA transparency exercise, the exposures of foreign credit institutions to French NFCs through branches and direct cross-border lending are estimated to amount to approximately 18% of the lending to French NFCs by French banks. In particular, institutions with the most significant exposures are based in Germany, Spain, Italy, the Netherlands and the United Kingdom. A substantial proportion of lending to French NFCs is also provided by non-EU banks, in particular from the United States and Japan.

However, market-based financing accounts for the lion's share of the debt of large French NFCs. Between 2010 and 2015, large French corporates increased their outstanding debt securities by 49%. The HCSF estimated market-based financing of French NFCs at just below 80% in June 2017. Furthermore, a significant share of large French NFCs issue bonds on foreign markets. While holdings of debt securities by banks are within the scope of the macroprudential measure, other sectors with substantial holdings such as the insurance sector and asset management are not. As there are no appropriate tools available for the non-banking sectors to address the identified risk, the HCSF relies on the signalling effect in relation to these sectors.

The ESRB deemed the request adequate and justified, and issued a recommendation for reciprocation in December 2018.[118] Although reciprocating the measure will not completely prevent regulatory arbitrage, the ESRB considered that raising awareness of the risk and preserving a level playing field among EU banks warranted reciprocation. The ESRB recommended applying the French measure to systemically important institutions having branches in France or providing direct cross-border services in France. Guided by the proportionality principle, the ESRB recommended a combined materiality threshold (de minimis principle):

(a) a threshold of €2 billion for the total original exposures of domestically authorised G-SIIs and O-SIIs at the highest level of consolidation of the banking prudential perimeter to the French NFC sector;

(b) a threshold of €300 million applicable to domestically authorised G-SIIs and O-SIIs equalling or exceeding the threshold mentioned in (a) for a single exposure to a French NFC or a French NFC group;

(c) a threshold of 5% of the G-SII's or O-SII's eligible capital at the highest level of consolidation, for exposures identified in (b).

[118] See Recommendation **ESRB/2018/8** of the European Systemic Risk Board of 5 December 2018 amending Recommendation ESRB/2015/2 on the assessment of cross-border effects of and voluntary reciprocity for macroprudential policy measures (OJ C 39, 1.2.2019, p. 1).

As an exception to the reciprocity framework, the materiality threshold is applied in the French case at the highest consolidated level for G-SIIs and O-SIIs in the reciprocating Member States.[119] The original measure applies at the highest level of consolidation in France. Applying the materiality threshold at an individual level could lead to the exemption of institutions which, at a consolidated level, have concentrated large exposures to highly indebted non-financial corporations having their registered office in France.

2.9.3.3 National flexibility measure in Sweden

Sweden's Finansinspektionen (FI) submitted its reciprocation request concerning the national macroprudential measure based on Article 458 of the CRR to the ESRB in November 2018. The measure is an institution-specific average risk weight floor of 25% for retail exposures to Swedish obligors collateralised by immovable property applied to credit institutions that use the IRB approach (see Section 2.5). The measure had been in force in Sweden since 2013 under Pillar 2 and was reciprocated by Denmark, also by using Pillar 2.

Currently, two branches of foreign banks have material Swedish mortgage exposures. Denmark and Finland are the two Member States with significant exposures to the Swedish RRE sector (see Chart 21).[120] Although these exposures mainly stem from the subsidiaries of these credit institutions in Sweden, the operations of their branches are also considered material. There may be an incentive for banks to shift a large part of mortgage portfolios from their subsidiaries to branches if the latter were not to be within the scope of the macroprudential measure. These incentives are amplified by the fact that the Swedish risk weight floor is one of the highest and a significant difference can be observed between the actual risk weights estimated by IRB banks and the risk weight floor.

The ESRB deemed the request justified to prevent regulatory arbitrage and to make it possible to adequately address all potential material sources of systemic risk relevant for Sweden and issued a recommendation for reciprocation in January 2019.[121] The ESRB recommended applying the Swedish measure to all credit institutions having branches in Sweden or providing direct cross-border services in Sweden. The ESRB recommended a materiality threshold of SEK 5 billion of exposures to the Swedish RRE market (de minimis principle), which corresponds to approximately 0.16% of the relevant market. Such a lower materiality threshold was deemed justified to ensure reciprocation for all material exposures and at the same time proportionate.

[119] The application of a measure at the consolidated level means that the measure applies to a credit institution, including all its subsidiaries. The credit institution and its subsidiaries are considered as if they were a single institution. The consolidated situation includes all exposures of the credit institution and its subsidiaries but excludes intra-group exposures between them.

[120] After the relocation of Nordea Group from Sweden to Finland on 1 October 2018 the Finnish banking sector also has significant cross-border exposures towards Finland. However, the latest data available to the ESRB refer to Q3 2018 and thus do not include this event.

[121] See Recommendation ESRB/2019/1 of the European Systemic Risk Board of 15 January 2019 amending Recommendation ESRB/2015/2 on the assessment of cross-border effects of and voluntary reciprocity for macroprudential policy measures (OJ C 106, 20.3.2019, p. 1).

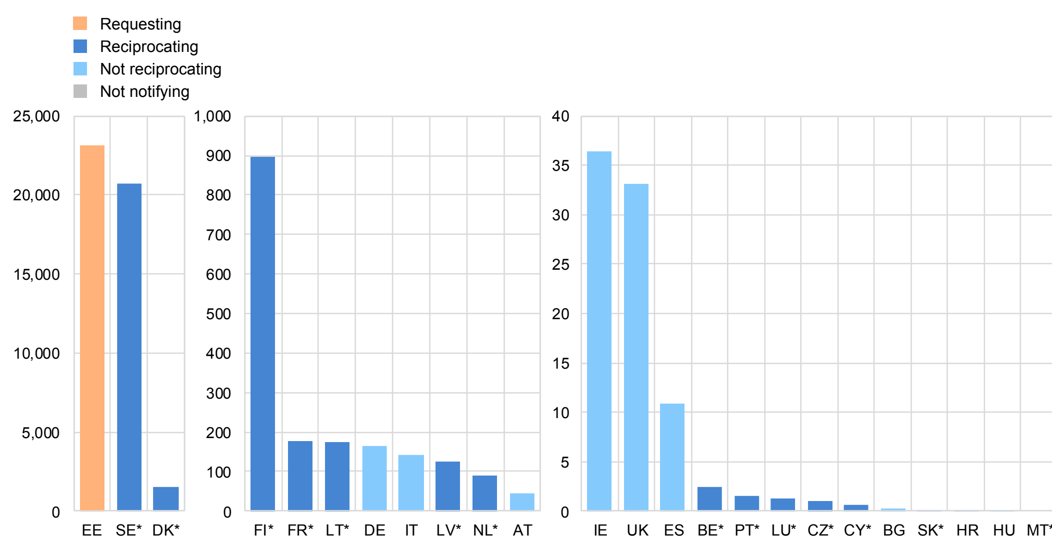
2.9.4 Reciprocating actions taken by Member States

2.9.4.1 Systemic risk buffer in Estonia

By the end of 2018, 14 Member States had reciprocated the Estonian SyRB (see Chart 18 and Chart A.5.1 in Annex 5).[122] These include Sweden, Denmark and Finland, the three Member States with the largest exposures to Estonia. Finland reciprocated the Estonian SyRB in 2018 after incorporating the SyRB into national legislation.[123] Eesti Pank reset the SyRB to 1%, in line with the two-year evaluation period, and proposed to formalise an institution-specific materiality threshold of €250 million (which approximates 1% of total risk-weighted credit exposures) which the ESRB included in its recommendation. This implied that Croatia, which had reciprocated the measure with a materiality threshold of 2% of total risk-weighted credit exposures in 2017, no longer fulfilled all the criteria to be considered as reciprocating. Poland and Slovenia reassessed and confirmed their non-reciprocation of the Estonian SyRB in 2018, applying the de minimis principle.

Chart 18
Credit exposures to Estonia (Q2 2018)

(EUR millions)



Sources: EBA (Detailed Risk Analysis Tools) and 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 chart 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 and with an asterisk. Member States that have not reciprocated the Estonian measure are shown in light blue. Grey bars indicate that no information on the Member State's reciprocation decision is available. No data were available for Greece, Poland, Romania and Slovenia. For Estonia, Bulgaria and Hungary, Q4 2017 data were used instead of Q2 2018 due to availability. Due to Estonia's recalibration of the SyRB, which now includes a de minimis threshold of 1% of total risk weighted credit risk exposures (i.e. €250 million), Croatia no longer fulfils all the criteria to be considered as reciprocating. 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. The chart cannot distinguish between exposures already covered by the Estonian measure itself and exposures that are only to be covered by reciprocation because the exposure may be taken by subsidiaries in Estonia.

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[122] See Recommendation **ESRB/2016/4** of the European Systemic Risk Board of 24 June 2016 amending Recommendation ESRB/2015/2 on the assessment of cross-border effects of and voluntary reciprocity for macroprudential policy measures (OJ C 290, 10.8.2016, p. 1).

[123] See Section 2.2 of the **Review of Macroprudential Policy in the EU in 2017**, ESRB, Frankfurt am Main, April 2018 regarding the introduction of the SyRB in Finland.

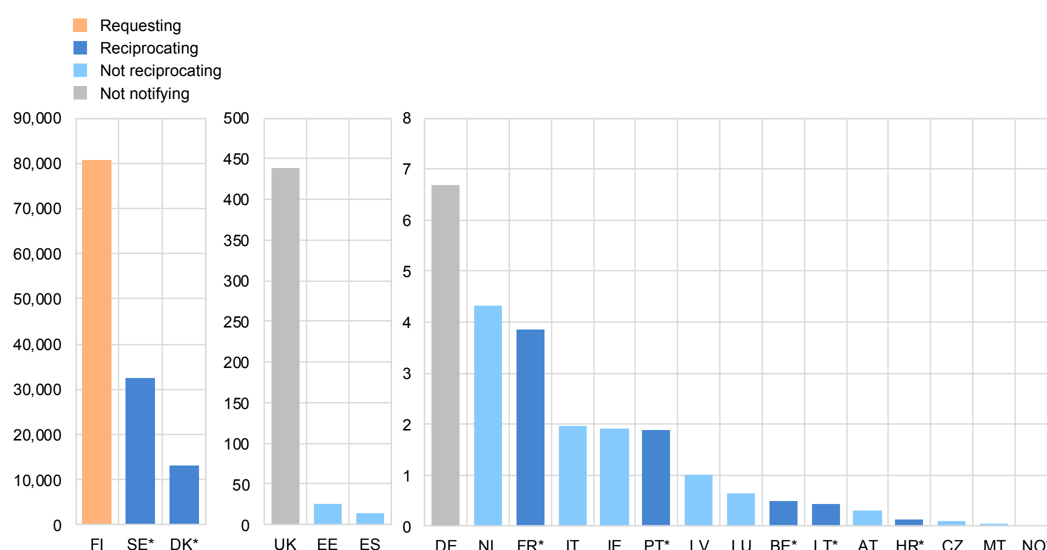
2.9.4.2 A risk weight floor for residential real estate exposures in Finland

By the end of December 2018, eight Member States had reciprocated the Finnish measure (see Chart 19 and Chart A.5.2 in Annex 5). Sweden, the Member State with the largest exposures to Finnish real estate, reciprocated the measure in December 2017, even before the ESRB issued its recommendation.[124] Denmark, which also has institutions with material exposures to the Finnish market, reciprocated the measure in April 2018. Belgium, France, Portugal, Norway, Lithuania and Croatia also reciprocated the measure as a matter of principle although their Finnish exposures were insignificant. Portugal, France and Lithuania reciprocated the measure without a materiality threshold. All other reciprocating countries exempted individual institutions with exposures below the €1 billion materiality threshold.

Chart 19

Credit exposures to Finnish residential real estate (Q2 2018)

(EUR millions)



Sources: EBA (Detailed Risk Analysis Tools) and 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 chart shows the original credit exposure to Finnish residential real estate of banks in different Member States, as measured by retail exposures secured by residential real estate. Finland as the Member State requesting reciprocation is shown in orange. Member States that have reciprocated the Finnish measure are shown in dark blue and with an asterisk. Member States that have not reciprocated the Finnish measure are shown in light blue. Grey bars indicate that no information on the Member State's reciprocation decision is available. No data were available for Bulgaria, Greece, Hungary, Poland and Romania. For Estonia, Q4 2017 data were used instead of Q2 2018 due to availability. Non-reciprocating countries with zero exposures have not been included in this chart. The chart cannot distinguish between exposures already covered by the Finnish measure itself and exposures that are only to be covered by reciprocation because the exposure may be taken by subsidiaries in Finland.

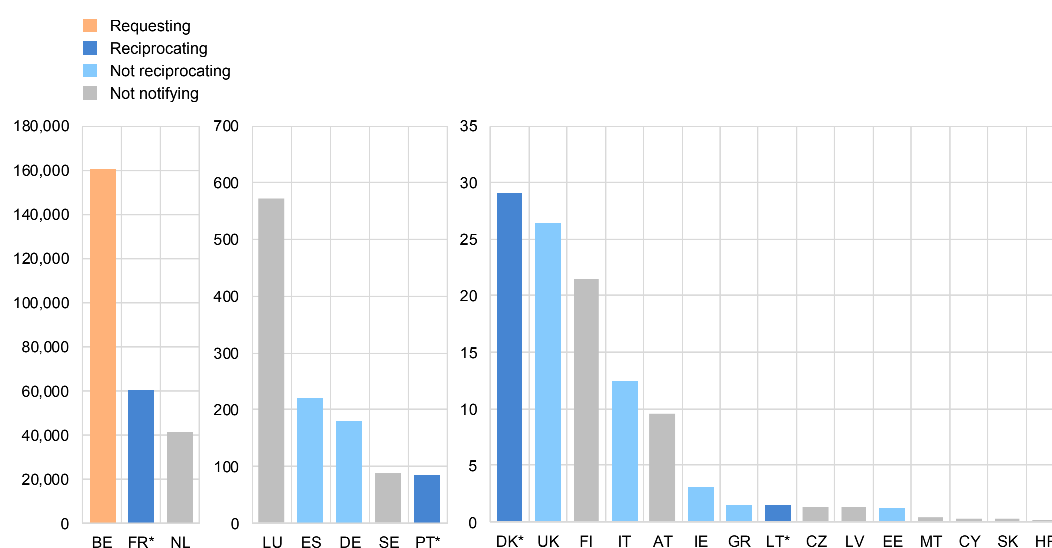
[124] See Recommendation **ESRB/2018/1** of the European Systemic Risk Board of 8 January 2018 amending Recommendation ESRB/2015/2 on the assessment of cross-border effects of and voluntary reciprocity for macroprudential policy measures (OJ C 41, 3.2.2018, p. 1).

2.9.4.3 Risk weight add-on for residential real estate in Belgium

So far, Denmark, France, Lithuania and Portugal have reciprocated the Belgian measure (see Chart 20 and Chart A.5.4 in Annex 5). The three-month deadline for implementation started on 21 September 2018 when the ESRB recommendation[125] was published in the Official Journal of the European Union. France, the Member State with the largest exposures to Belgian real estate, reciprocated the measure in October 2018 without a materiality threshold. Denmark and Portugal have reciprocated the Belgian measure as a matter of principle and without any materiality threshold. Nine Member States (Estonia, Germany, Greece, Ireland, Italy, Romania, Slovenia, Spain and the United Kingdom) notified the ESRB that they will not reciprocate the Belgian measure based on the de minimis principle. French and Dutch banks have the most significant exposures to the Belgian mortgage market. Nine Member States have reciprocated the previous Belgian measure, which expired in May 2017, including these four countries (see Chart A.5.3 in Annex 5).[126]

Chart 20
Credit exposures to Belgian residential real estate (Q2 2018)

(EUR millions)



Sources: EBA (Detailed Risk Analysis Tools) and 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 chart shows the original credit exposure to Belgian residential real estate of banks in different Member States, as measured by retail exposures secured by residential real estate. Belgium as the Member State requesting reciprocation is shown in orange. Member States that have reciprocated the Belgian measure are shown in dark blue and with an asterisk. Member States that have not reciprocated the Belgian measure are shown in light blue. Grey bars indicate that no information on the Member State's reciprocation decision is available. No data were available for Bulgaria, Hungary, Poland and Romania. For Greece, Q1 2018 data were used and for Estonia, Q4 2017 data were used instead of Q2 2018 due to availability. Non-reciprocating countries with zero exposures have not been included in this chart. The chart cannot distinguish between exposures already covered by the Belgian measure itself and exposures that are only to be covered by reciprocation because the exposure may be taken by subsidiaries in Belgium.

[125] See Recommendation **ESRB/2018/5** of the European Systemic Risk Board of 16 July 2018 amending Recommendation ESRB/2015/2 on the assessment of cross-border effects of and voluntary reciprocity for macroprudential policy measures (OJ C 338, 21.9.2018, p. 1).

[126] See Section 9.4 of the **Review of Macroprudential Policy in the EU in 2017**, ESRB, Frankfurt am Main, April 2018.

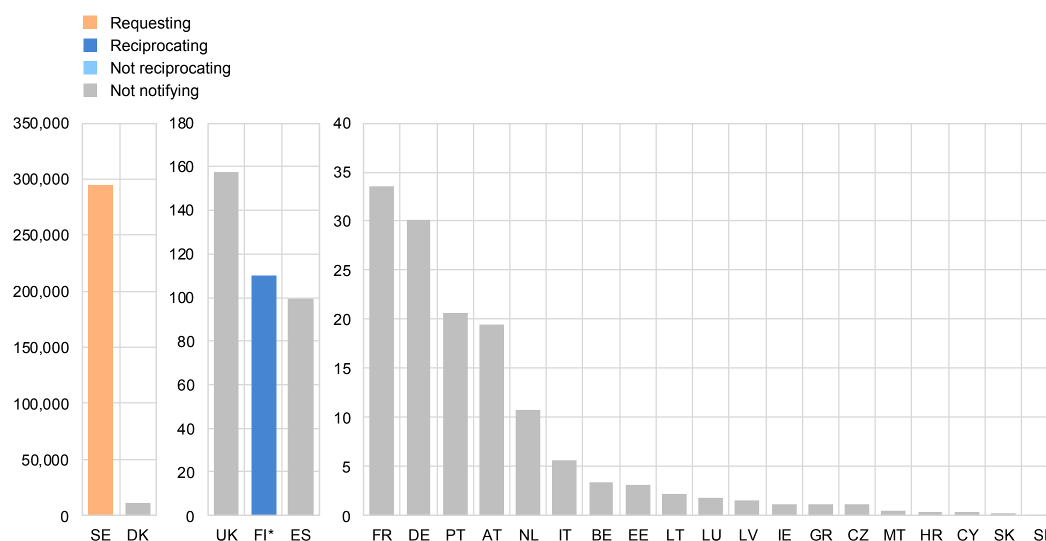
2.9.4.4 A risk weight floor for residential real estate exposures in Sweden

Finland voluntarily reciprocated the Swedish measure effective from 31 December 2018 before the ESRB recommended its reciprocation (see Chart 21 and Chart A.5.5 in Annex 5). Denmark and Finland are the two countries with significant exposures to the Swedish mortgage market. The chart below shows exposures to the Swedish mortgage market on 30 June 2018 and therefore does not take into account the relocation of Nordea from Sweden to Finland on 1 October 2018. After the relocation, Finland (including subsidiaries) is the country with the highest foreign exposures to the Swedish mortgage market, with Denmark having the second-highest exposures thereto.[127] Recommendation **ESRB/2019/1** was published in the Official Journal of the European Union on 20 March 2019. Relevant authorities are recommended to adopt reciprocating measures no later than three months after this date.

Chart 21

Credit exposures to Swedish residential real estate (Q2 2018)

(EUR millions)



Sources: EBA (Detailed Risk Analysis Tools) and 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 chart shows the original credit exposure to Swedish residential real estate of banks in different Member States, as measured by retail exposures secured by residential real estate. Sweden as the Member State requesting reciprocation is shown in orange. Member States that have reciprocated the Swedish measure are shown in dark blue and with an asterisk. Member States that have not reciprocated the Swedish measure are shown in light blue. Grey bars indicate that no information on the Member State's reciprocation decision is available. No data were available for Bulgaria, Hungary, Poland and Romania. For Greece, Q1 2018 data were used and for Estonia, Q4 2017 data were used instead of Q2 2018 due to availability. The chart cannot distinguish between exposures already covered by the Swedish measure itself and exposures that are only to be covered by reciprocation because the exposure may be taken by subsidiaries in Sweden.

[127] Denmark in the past voluntarily reciprocated the former Swedish Pillar 2 measure.

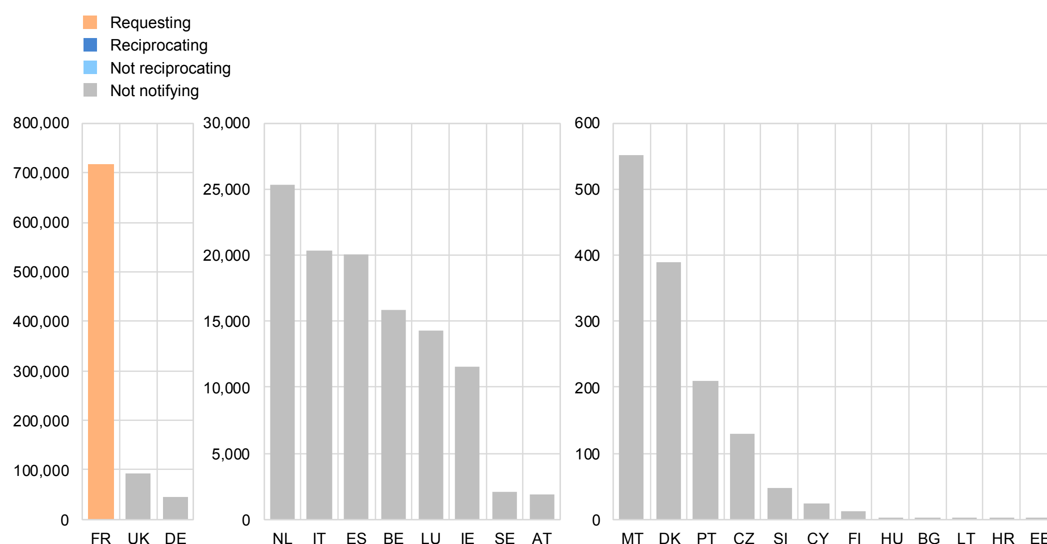
2.9.4.5 Tighter large exposure limits for NFCs in France

Apart from France, credit institutions from eight countries reported significant exposures to French NFCs by the end of June 2018 (see Chart 22 and Chart A.5.6 in Annex 5). The highest exposures are reported by the United Kingdom followed by Germany, the Netherlands, Italy, Spain, Belgium, Luxembourg and Ireland. However, the available data cannot distinguish to what extent these are large exposures to individual NFCs or NFC groups of more than €300 million, which are targeted by the French measure. Recommendation **ESRB/2018/8** was published in the Official Journal of the EU on 1 February 2019. Relevant authorities are recommended to adopt reciprocating measures no later than six months after this date.

Chart 22

Credit exposures to French non-financial corporations (Q2 2018)

(EUR millions)



Sources: EBA (Detailed Risk Analysis Tools) and 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 chart shows the original credit exposure to the NFC sector in France of banks in different Member States. We approximate this number by summing specialised corporate lending with other corporate lending, thus excluding corporate lending to SMEs. For more information on the EBA's COREP-based Detailed Risk Analysis Tools, see Annex II of its **Methodological Guide**, more specifically Matrix 1 on page 141. France as the Member State requesting reciprocation is shown in orange. Member States that have reciprocated the French measure are shown in dark blue and with an asterisk. Member States that have not reciprocated the French measure are shown in light blue. Grey bars indicate that no information on the Member State's reciprocation decision is available. No data were available for Poland and Romania. For Hungary, Bulgaria and Estonia, data for Q4 2017 were used instead of Q2 2018 due to availability. Non-reciprocating countries with zero exposures have not been included in this chart. The chart cannot distinguish between exposures already covered by the French measure itself and exposures that are only to be covered by reciprocation because the exposure may be taken by subsidiaries in France.*

2.10 Macroprudential policy beyond the banking sector

In contrast to the many measures targeted at the banking sector, few Member States took macroprudential measures applying to the non-bank financial sector. A side effect of the increasing role of the non-bank financial sector is that existing activities and risks might migrate from the banking sector and that new risks might emerge. For example, while market-based finance provides firms with an alternative source of funding if the banking sector becomes impaired during times of stress, it makes it more difficult for macroprudential authorities to curb excessive borrowing during times of exuberance. As illustrated in Section 2.8.1, while the measure by the French authorities to limit concentration risk in banks' exposures to highly indebted large French NFCs may increase the resilience of the banking sector, it can only indirectly affect the access to credit of these NFCs as they can and, to a significant extent, do raise debt funding via capital markets. This makes it important that authorities have a comprehensive macroprudential toolkit to address risks to financial stability, including from the non-bank financial sector.

This section sets out the tools that ESRB members have developed to address risks beyond the banking sector and the measures they took to address them. Despite the lack of a comprehensive macroprudential toolkit to address risks beyond the banking sector, ESRB members took measures of a macroprudential nature to address such risks. Moreover, some Member States passed legislation to broaden the toolkit available in their jurisdictions and developed analytical frameworks. This included bringing a macroprudential perspective to microprudential regulation; designing recovery and resolution frameworks; and developing macroprudential tools to target systemic risk. The remainder of this section describes this in more detail. The ESRB's contributions in this area are described in the ESRB Annual Report.

2.10.1 Developing risk monitoring frameworks for the non-bank financial sector

ESRB members continued to develop a comprehensive risk monitoring framework for the non-bank financial sector. The non-bank financial sector 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. Progress in building this risk monitoring framework continued during the review period of this report. However, the lack of granular data in some parts of the non-bank financial sector and for some activities continued to hamper progress.

As part of its monitoring framework, the European Securities and Markets Authority (ESMA) published the first edition of its Annual Statistical Report on derivatives markets in the EU. The report provides a comprehensive view of the EU derivatives market and is a key element of a monitoring framework for risks beyond the banking sector.[128] The report shows that gross notional amounts outstanding in derivatives markets in the EU increased from €605 trillion at the start of 2017 to €660 trillion at the end of 2017. Over the same period, central clearing rates increased from 40% to 58% for interest rate derivatives and from 25% to 27% for credit derivatives. The report also considers concentration and interconnectedness in these markets. It finds that concentration among market participants increased in commodity derivatives markets and to a lesser extent in interest rate derivatives markets.

[128] See **ESMA Annual Statistical Report: EU Derivative Markets**, ESMA, Paris, 2018.

2.10.2 Bringing macroprudential perspectives to microprudential regulation

The European Insurance and Occupational Pensions Authority (EIOPA) announced a reduction in the ultimate forward rates used for discounting cash flows of insurance obligations. EIOPA for the first time implemented its methodology for calculating ultimate forward rates, which are a key element for deriving the risk-free interest rate term structures used to discount expected insurance obligations. For the euro, this resulted in a reduction in the applicable ultimate forward rate (UFR) in 2018 to 4.05% from the previous level of 4.2%. Other things being equal, a reduction in the UFR means that the technical provisions set aside by insurers to pay policyholders in case of claims will be higher.

EIOPA advised the European Commission to modify the way capital requirements for interest rate risk are calculated so that the requirements take account of negative interest rates. The current methodology used to calculate capital requirements for interest rate risk underestimates risks since it does not cater for negative interest rates and is less effective at low interest rates. As part of the review process of the prudential rules for insurers (Solvency II), EIOPA provided the European Commission with advice on assumptions, methods and parameters used to calculate solvency capital requirements, and proposed a new methodology that better reflects interest rate risks. In particular, if cash flows from assets are not well matched to cash flows from liabilities, the new methodology would lead to an increase in capital requirements.

Since January 2018, ESMA has the power to temporarily restrict or prohibit the marketing, distribution or sale of financial products. While this is part of a strengthening of investor protection introduced under the new MiFID (Markets in Financial Instruments Directive) regime, large-scale mis-selling of financial products can also have implications from a financial stability perspective. Therefore, this power can also be used to address “a threat to the stability of the whole or part of the financial system”. While there were two occasions in 2018 when this power was used for investor protection purposes, it was not used to address financial stability concerns.

In Belgium, new liquidity management tools are now available to asset managers. The ESRB Recommendation on leverage and liquidity in investment funds noted that some countries only had a small number of liquidity management tools available to asset managers.[129] This can make it difficult for fund managers to handle unexpectedly high levels of redemptions, which could lead to fire sales, amplifying shocks within the financial system. To mitigate this risk, the Belgian Financial Services and Markets Authority (*Autorité des Services et Marchés Financiers/Autoriteit voor Financiële Diensten en Markten* – FSMA) introduced three new liquidity tools in 2018: swing pricing, anti-dilution levies and redemption gates.[130]

In Spain, new instruments beyond banking will become available to the sectoral supervisors. They are designed to avoid regulatory arbitrage and the deriving transfer of risk related to credit activity from the banking sector to the securities and insurance sectors. The National Securities Market Commission (*Comisión Nacional del Mercado de Valores* – CNMV) has been granted the ability to adopt measures aimed at strengthening the liquidity of institutions and collective investment entities by setting liquidity requirements. Furthermore, the CNMV has also been authorised to impose limits and conditions on the activities carried out by its supervised entities with the aim of preventing excessive indebtedness. In addition, the Directorate General of

[129] See **ESRB Recommendation on liquidity and leverage risks in investment funds**, ESRB, Frankfurt am Main, February 2018.

[130] See the **Arrêté royal** or **Koninklijk besluit** of 15 October 2018.

Insurance and Pension Funds (*Dirección General de Seguros y Fondos de Pensiones* – DGSFP) has been empowered to establish exposure limits for economic sectors and asset categories for insurance and reinsurance entities, as well as to set limits and conditions on operations entailing the transfer of risk and insurance portfolios by these entities.

2.10.3 Supporting the design of recovery and resolution frameworks

Recovery and resolution frameworks are becoming operational in France and the Netherlands. In the Netherlands, a new law requires insurers to periodically submit a preparatory recovery plan to De Nederlandsche Bank (DNB) and has extended the toolkit of DNB to drawing up resolution plans and intervening where insurers are about to fail. This new recovery and resolution act entered into force on 1 January 2019. In France, the Prudential Supervision and Resolution Authority (*Autorité de Contrôle Prudentiel et de Résolution* – ACPR) has been designated as a resolution authority for the insurance sector. Insurers with assets exceeding €50 billion, or those that are requested to by the ACPR, have to establish pre-emptive recovery plans that have to be updated every two years and sent to the ACPR.

2.10.4 Developing macroprudential tools to target systemic risk

EIOPA advocated complementing Solvency II with macroprudential tools or measures. EIOPA published a series of reports on systemic risk and macroprudential policy in insurance, thereby engaging in preparatory discussions for the Solvency II 2020 review.[131] The reports describe how insurers and reinsurers can create or amplify systemic risk in certain circumstances. While Solvency II is a microprudential regime, some of its measures have a macroprudential impact. For instance, the symmetric adjustment modifies the capital requirements for equity risk in a countercyclical way. EIOPA proposes complementing Solvency II with further macroprudential tools or measures and seeks to further investigate capital- and reserving-based tools, liquidity-based tools, exposure-based tools and pre-emptive planning.

[131] See **Systemic risk and macroprudential policy in insurance**, EIOPA, Frankfurt am Main, 2017; **Solvency II tools with macroprudential impact**, EIOPA, Frankfurt am Main, 2018; and **Other potential macroprudential tools and measures to enhance the current framework**, EIOPA, Frankfurt am Main, 2018.

2.11 Measures to mitigate risks associated with a no-deal Brexit

European and UK authorities have taken measures to mitigate risks relating to insurance, investment services and central clearing in the context of Brexit. Authorities at both EU and national level (including in the UK) have made preparations to mitigate risks to financial stability that might arise in particular if no agreement were to be concluded between the UK and the EU27 (hereafter "no-deal Brexit"). This includes risks to financial stability relating to market access and the servicing of contracts.[132] While the review period of this report covers 2018 only, in light of the relevance of Brexit, this section also considers contingency measures and mitigating actions until 10 April 2019, when, at a Special European Council, EU27 leaders agreed to delay Brexit until 31 October 2019.[133]

European authorities took a range of measures to mitigate risks relating to financial market infrastructures and cleared derivatives contracts.

- On 19 December 2018, the **European Commission** adopted temporary and conditional equivalence decisions for a fixed, limited period of 12 months to avoid any disruptions in the central clearing of derivatives and of 24 months for central depository services. Further delegated regulations, based on technical standards developed by ESMA and the ESAs and facilitating the novation of over-the-counter contracts from the UK to an EU27 counterparty, were also adopted.[134] As of 25 March 2019, the European Commission had completed its preparations for a no-deal Brexit and affirmed a "high degree of preparation by Member States for all scenarios".[135] In early April, the European Commission adopted amendments to the equivalence decisions related to the central counterparties (CCPs) and the central securities depository established in the UK.[136]
- In February 2019, **ESMA** had agreed Memoranda of Understanding (MoUs) with the Bank of England (BoE) for the recognition of the three central counterparties and of the central securities depository established in the UK, which would take effect in the case of a no-deal Brexit.[137] On 18 February 2019, ESMA announced that, in the event of a no-deal Brexit, it would recognise the three central counterparties established in the UK to provide their services in the EU.[138] On 5 April 2019, ESMA announced that it had adopted new recognition decisions for the CCPs and central securities depository (CSD) established in the UK.[139]

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[132] **Statement by the European Commission on the vote on the Withdrawal Agreement in the House of Commons.**

[133] See **Special European Council (Art.50), 10/04/2019**, Brussels, 10 April 2019.

[134] **Brexit: European Commission implements "no-deal" Contingency Action Plan in specific sectors**, European Commission, Brussels, December 2018; **Brexit Preparedness Seminar on Financial Services**, European Commission, Brussels, November 2018. Links to the equivalence decisions on the UK CCPs and the UK CSD can be found in the **list of legislative initiatives and other legal acts** of the European Commission. See also **Regulatory Technical Standards for novations related to Brexit.**

[135] See **Brexit preparedness: EU completes preparations for possible "no-deal" scenario on 12 April**, as well as **European Commission preparedness notices**. See also **European Commission takes stock of preparations and provides practical guidance to ensure coordinated EU approach**, Brussels, 10 April 2019.

[136] See **Commission Implementing Decision (EU) 2019/544 of 3 April 2019** and **Commission Implementing Decision (EU) 2019/545 of 3 April 2019**, Brussels, 3 April 2019.

[137] See **ESMA agrees no-deal Brexit MoUs with the Bank of England for recognition of UK CCPs and the CSD**, ESMA, Paris, 4 February 2019.

[138] See **ESMA to recognise three UK CCPs in the event of a no-deal Brexit**, ESMA, Paris, 18 February 2019.

[139] See **ESMA has adopted new recognition decisions for the three UK CCPs and the UK CSD in the event of a no-deal Brexit on 12 April**, ESMA, Paris, 5 April 2019. See also **ESMA update on no-deal Brexit preparations**, ESMA, Paris, 12 April 2019.

In 2018, ESMA continued to monitor how the principles outlined in its four 2017 opinions[140] were being implemented in practice through the established Supervisory Coordination Network (SCN). The SCN brings together experts from a broad range of competent authorities who table actual cases that they are facing involving UK entities looking to move to the EU27. This new forum is an important means of sharing information and promoting convergent practices. In February, ESMA published a supervisory briefing designed to help national competent authorities (NCAs) to make their judgements during the authorisation and the ongoing supervision of firms that intend to establish (or have established) a branch in a non-EU jurisdiction.[141] In another ESMA public statement, firms were also reminded of their obligations to provide clients with accurate disclosure on the impact of Brexit on the provision of services and investors' rights. ESMA and EU securities regulators also agreed MoUs with the UK Financial Conduct Authority (FCA) and published statements on credit rating agencies and trade repositories, as well as on its approach to the application of some key MiFID II/MiFIR (Markets in Financial Instruments Regulation) and Benchmarks Regulation provisions in the event of a no-deal Brexit. [142]

- In 2018, **EIOPA** issued two opinions directed at national authorities to ensure that the impact of the UK becoming a third country is managed.[143] In one of its opinions, EIOPA called on insurance supervisors to identify, measure, monitor and manage this risk. In its second opinion, EIOPA reminded national authorities about the duty of insurers and their intermediaries to inform customers of measures taken concerning the service continuity of their contracts. EIOPA analysed the impact of the service continuity issue in insurance and concluded that, due to the nature and scale of the business concerned, it does not give rise to financial stability risks.[144] Furthermore, in 2019 EIOPA issued a recommendation[145] for the insurance sector, thereby providing guidance on the supervisory treatment of residual insurance business not yet covered by contingency plans. In order to ensure future cooperation in the fields of prudential and conduct supervision, mutual assistance and the regular exchange of information in a no-deal scenario, EIOPA and its members agreed MoUs with the BoE and the FCA.[146] In the area of occupational pension institutions' supervision, EIOPA and its members agreed similar MoUs with The Pensions Regulator.

[140] See **Opinion to support supervisory convergence in the area of secondary markets in the context of the United Kingdom withdrawing from the European Union**, ESMA, Paris, 13 July 2017; **Opinion to support supervisory convergence in the area of investment firms in the context of the United Kingdom withdrawing from the European Union**, ESMA, Paris, 13 July 2017; **Opinion to support supervisory convergence in the area of investment management in the context of the United Kingdom withdrawing from the European Union**, ESMA, Paris, 13 July 2017; and **General principles to support supervisory convergence in the context of the United Kingdom withdrawing from the European Union**, ESMA, Paris, 31 May 2017.

[141] See **ESMA publishes supervisory briefing on the supervision of non-EU branches of EU firms**, ESMA, Paris, 6 February 2019.

[142] See **ESMA and EU securities regulators agree no-deal Brexit MoUs with FCA**, ESMA, Paris, 1 February 2019.

[143] See **Opinion on the solvency position of insurance and reinsurance undertakings in light of the withdrawal of the United Kingdom from the European Union**, EIOPA, Frankfurt am Main, 18 May 2018; and **Opinion on disclosure of information to customers about the impact of the withdrawal of the United Kingdom from the European Union**, EIOPA, Frankfurt am Main, 28 June 2018. EIOPA also issued two opinions in July and December 2017, outlining supervisory principles for Brexit relocations and ensuring service continuity including the timely implementation of contingency plans; see **Opinion on supervisory convergence in light of the United Kingdom withdrawing from the European Union**, EIOPA, Frankfurt am Main, 11 June 2017; and **Opinion on service continuity in insurance in light of the withdrawal of the United Kingdom from the European Union**, EIOPA, Frankfurt am Main, 21 December 2017.

[144] See the **EIOPA website**.

[145] See **Recommendations for the insurance sector in light of the United Kingdom withdrawing from the European Union**, EIOPA, Frankfurt am Main, 19 February 2019.

[146] See **EIOPA and its Members agree on No-deal Brexit Memoranda of Understanding with the Bank of England and the Financial Conduct Authority**, EIOPA, Frankfurt am Main, 5 March 2019.

- In 2018, the **EBA** continued to closely follow Brexit-related developments to understand the potential risks and preparation of financial institutions for the UK's withdrawal from the EU. As part of this work, in June 2018 the EBA published an opinion on the need for institutions to establish and enact adequate contingency planning for a potential no-deal scenario.[147] In this opinion the EBA also outlined specific areas of concern (or risk channels) that financial institutions should duly consider in their contingency planning without relying on any possible public sector solutions. In addition, it pointed to the need for institutions to ensure appropriate customer communication. The EBA reinforced these messages in its follow-up press release of December 2018 urging the affected institutions to proceed with informing their customers about the risks of a no-deal scenario and the mitigating measures that they have taken and advising them accordingly.[148] Throughout the year the EBA, together with the competent and resolution authorities, continued to monitor progress by the institutions in their contingency planning, focusing on institutions (i) acquiring all necessary authorisations and relocating business, (ii) ensuring access to market infrastructures, (iii) diversifying access to funding, (iv) introducing contractual bail-in clauses into newly issued MREL instruments[149] and (v) introducing contractual clauses to facilitate data transfers. In March 2019, the EBA issued another opinion focusing on ensuring that depositors in the branches of the UK credit institutions in the EU are adequately protected by the EU deposit guarantee schemes in the event of a no-deal scenario.[150] In 2018, the EBA was also active in the preparations for the post-Brexit cooperation arrangements in the event of a no-deal scenario, where the focus was three-fold: (1) cooperation between supervisors;[151] (2) cooperation between resolution authorities; and (3) cooperation between the EBA (as the relevant authority) and the UK authorities.

In the UK, the authorities prepared the UK and EU business counterparties to mitigate the risks of a no-deal Brexit. The EU (Withdrawal) Act became law on 26 June 2018, and the UK Parliament is finalising secondary legislation to mitigate disruptions to financial services. The temporary permissions regime will allow EEA firms to operate for a limited period while they seek authorisation from the Prudential Regulation Authority. To help prepare industry and thereby mitigate the effects of a disorderly Brexit, the BoE, the FCA and HM Treasury also issued a number of consultation papers, surveys and updates.[152] As at 5 March 2019, 14 of 16 particularly important

[147] See **Opinion of the European Banking Authority on preparations for the withdrawal of the United Kingdom from the European Union**, EBA, London, 25 June 2018.

[148] See **The EBA calls for more action by financial institutions in their Brexit-related communication to customers**, EBA, London, 17 December 2018.

[149] The Bank Recovery and Resolution Directive requires banks to meet a minimum requirement for own funds and eligible liabilities (MREL) so as to be able to absorb losses and restore their capital position allowing banks to continuously perform their critical economic functions during and after a crisis.

[150] See **Opinion of the European Banking Authority on deposit protection issues stemming from the withdrawal of the United Kingdom from the European Union**, EBA, London, 1 March 2019.

[151] The EBA developed a template for bilateral MoUs between EU and UK supervisors outlining provisions of supervisory cooperation and information exchange. Its aim is to ensure that there are no breakdowns in the supervision of cross-border financial institutions in a no-deal scenario. The template is similar to the MoUs already concluded between the EU and other non-EU, third country, supervisory authorities. See **EBA Board of Supervisors agrees a template for the MoU to facilitate supervisory cooperation between the EU and UK supervisors in case of a no-deal Brexit**, EBA, London, 20 March 2019; and **PRA and FCA agree Memorandum of Understanding (MoU) with EBA**, PRA and FCA, London, 20 March 2019.

[152] **Information about EU Exit including the article 50 process, negotiations, and announcements about policy changes as a result of EU Exit**, UK government; **EU withdrawal**, Bank of England; **Financial Stability Report**, No 44, Bank of England, London, November 2018, p. 29; **Statement on equivalence of the future UK legal and supervisory framework for central counterparties and central securities depositories**, Bank of England, London, December 2018; **Information on the effect of the UK's withdrawal from the EU on FMI supervision**, Bank of England, London.

pieces of secondary legislation to mitigate the risks of disruption to users of financial services had become law.[153]

Individual EU27 Member States also prepared and adopted national measures in 2018 and early 2019 to mitigate risks to financial stability from a disorderly Brexit. For example, the French Parliament passed a law that allows the French Government to adopt measures to: (i) allow access of French entities to the interbank and settlement systems of third countries; (ii) ensure the finality of payments made through such third-country systems and the continuity of master agreements in financial services; (iii) secure the performance of contracts which have been entered into prior to the loss by the UK of mutual recognition rights; (iv) designate the relevant authority for supervising activities relating to securitisation; and (v) introduce specific rules for the management of collective investment schemes which are subject to investment ratios in European entities. In Germany, a law gives the German supervisor (*Bundesanstalt für Finanzdienstleistungsaufsicht* – BaFin) the powers to apply temporary rules and exemptions to relevant parties which had already entered into business with UK banks and/or insurance companies prior to Brexit.[154] These powers would be available to BaFin for up to 21 months in the event of a no-deal Brexit. Similar laws have, for example, been adopted by the Czech Republic, Spain and the Netherlands. Draft laws have also been prepared in Belgium, Finland, Ireland, Luxembourg, Poland and Sweden, and the Italian Ministry of Finance has prepared transitional measures that could be adopted as decree-law if necessary.

The number, focus and extent of specific contingency measures related to financial services vary across Member States.[155] For instance, while in the investment services and investment fund sector some Member States have implemented contingency measures that focus on granting temporary permissions to continue providing certain services or on preserving certain contracts, other Member States have adopted a more general approach that also allows new contracts and transactions to take place after Brexit. While the duration of any such temporary permission is limited to a maximum of 21 months, some Member States have stipulated shorter periods. Some Member States have not established any contingency measures for the investment services and investment fund sector and do not intend to do so.

[153] **Financial Policy Summary and Record of the Financial Policy Committee Meeting**, Bank of England, London, 5 March 2019.

[154] See the **publication** in the Bundesgesetzblatt, No 9, Berlin, 25 March 2019.

[155] The national preparedness measures taken by Member States generally go beyond specific contingency measures related to the financial or economic sectors and address broader topics such as residency, social security and other rights; see **National Brexit information in Member States**.

Special Feature A: Use of national flexibility measures under Article 458 of the CRR[156]

The ESRB, in its letter of 29 March 2012[157] on the principles for the development of a macroprudential framework in the EU in the context of the capital requirements legislation, advocated for an EU macroprudential framework to be developed under three principles:

(a) **flexibility,** under which macroprudential authorities at both Member State and EU level need discretion to require additional disclosures and to temporarily tighten a diverse range of prudential requirements;

(b) **pre-emptive and effective action,** according to which macroprudential policy must have the scope to act early and effectively before the build-up of significant systemic risk, having regard for unintended consequences using the most effective policy tools;

(c) **efficient coordination,** that safeguards possible negative externalities or unintended effects for the sustainability of the single market in financial services or for the economies of other Member States.

These principles are explicitly recognised in Recital 15 of the CRR and the idea materialised in Article 458 of the CRR when the banking reform was adopted in 2013. According to Recital 15 of the CRR a number of tools to prevent and mitigate macroprudential and systemic risks were established in order to ensure flexibility. In addition, they were to ensure that the use of the macroprudential toolkit is subject to an appropriate control in order, first, not to harm the internal market and, second, to ensure transparency and consistency in the use of said tools.

In recent years, Member States have increasingly used Article 458 of the CRR to mitigate national systemic risk. This special feature describes the legal framework of Article 458 of the CRR (Subsection A.1) and summarises the measures adopted by Member States so far (Subsection A.2). Subsection A.2 first provides an overview of the measures and then describes each individual measure in more detail.

A.1 Legal framework

Article 458 of the CRR enables national authorities to enact macroprudential measures imposing stricter prudential requirements for domestically authorised institutions or a subset of those institutions, provided that certain substantive conditions are met (Article 458(2) of the CRR). The first condition for the activation of a national flexibility measure[158] is the existence of a significant macroprudential or systemic risk that concerns only one Member State.[159] To activate a national flexibility measure, the relevant authority[160] must demonstrate the change in the intensity of a macroprudential or systemic risk and that such change poses a threat to

156 Prepared by Ľuboš Šesták and Tiago Bolhão Páscoa (both ESRB Secretariat).

157 Principles for the development of a macro-prudential framework in the EU in the context of the capital requirements legislation – a letter from Mario Draghi, Chair of the ESRB, to key EU recipients.

158 The national flexibility measures are designated in the CRR as “stricter national measures” or simply as “national measures”.

159 Article 458(2) and (4) of the CRR.

160 Member States must designate the authority in charge of applying national flexibility measures under Article 458 of the CRR (Article 458(1)).

financial stability at the national level (Article 458(2)(a) and (b) of the CRR). Second, there is a "pecking order" for the activation of a measure under Article 458 of the CRR. The relevant national authority must demonstrate that other measures set out in the CRR[161] or in the CRD[162] did not and cannot adequately address the macroprudential or systemic risk that was identified taking into account the relative effectiveness of those measures (Article 458(2)(a) and (b) of the CRR). Thirdly, not all measures are deemed to be under the regime of Article 458 of the CRR, but only those types of measures expressly set out in its second paragraph and that concern the level of own funds; large exposure limits; public disclosure requirements; the level of the capital conservation buffer, liquidity requirements, risk weights for the residential and commercial property sector; and intra-financial sector exposures. In addition, the relevant authority must provide justification as to why the draft measure(s) is (are) deemed by the relevant authority to be suitable, effective and proportionate to address the identified risk. Finally, taking into account the information that is available to the Member State concerned, the relevant authority should assess the likely positive or negative impact of the draft measure(s) in the internal market. In particular, the national flexibility measure(s) must not entail disproportionate adverse effects on the whole or parts of the financial system in other Member States or in the EU as a whole, thus avoiding forming or creating an obstacle to the functioning of the internal market.

The activation of a national flexibility measure follows a complex and multi-level procedure at the European level. The procedure starts with a notification to the European Parliament, the Council, the Commission, the ESRB and the European Banking Authority (EBA), which should include all aspects or conditions mentioned in the previous paragraph together with relevant quantitative or qualitative evidence supporting the facts mentioned in the notification. Within one month of receiving the notification, the ESRB and the EBA must provide their opinions on the above-mentioned substantive conditions to the Council, the Commission and the Member State concerned.

Following the opinions of the ESRB and of the EBA, and taking them fully into account, the Commission may, within one month, propose to the Council an implementing act to reject the draft national measures if there is robust, strong and detailed evidence that the national flexibility measure will have a negative impact on the internal market that outweighs the financial stability benefits resulting in a reduction of the macroprudential or systemic risk identified. In the absence of a Commission proposal within that period of one month, the Member State concerned may immediately adopt the national flexibility measure(s). There may also be a formal decision taken by the Commission consisting in not proposing to the Council an implementing act to reject the national flexibility measure(s). If the Commission proposes to the Council an implementing act to reject the national flexibility measure(s), the Council will, also within one month and taking into account the opinions of the ESRB and of the EBA, make its decision and state its reasons for rejecting or not rejecting said measures (Article 458(4) of the CRR). However, the discretion regarding its decision is somewhat limited since it can only reject the national flexibility measure(s) if it considers that one or more of the conditions described above are not complied with.

National flexibility measure(s) are limited in time. National flexibility measures that allow national authorities to impose stricter prudential limits to address significant macroprudential or systemic risk may be applied for up to two years or until the macroprudential or systemic risk ceases to exist if that occurs sooner (Article 458(4) of the CRR). There is, however, a possibility of

[161] Risk weights for certain real estate exposures of credit institutions using the standardised approach (Article 124 of the CRR) and loss given default (Article 164 of the CRR) and macroprudential capital buffers.

[162] Pillar 2 (Articles 101, 103, 104, 105 of the CRD IV) and liquidity charges (Article 105 of the CRD IV); systemic risk buffer (Articles 133 and 134 of the CRD IV) and capital conservation buffer (Article 136 of the CRD IV).

extending the period of application of national flexibility measures before it expires for one additional year each time, which must follow the procedure described in the previous paragraph (Article 458(9) of the CRR).

Notwithstanding this procedure to activate national flexibility measure(s), Article 458(10) of the CRR grants some limited discretion to an activating Member State. Member States shall be allowed to increase the risk weights for real estate and for the intra-financial sector beyond those provided in the CRR by up to 25%, and to tighten the large exposure limit[163] by up to 15% for a period of up to two years or until the macroprudential or systemic risk ceases to exist if that occurs sooner. This discretionary action is subject to the notification to the European Parliament, the Council, the Commission, the ESRB and the EBA. The notification should include all aspects or conditions mentioned in the first paragraph, together with relevant quantitative or qualitative evidence supporting the facts mentioned in the notification.

National flexibility measures are not subject to mandatory reciprocity. This does not prevent Member States from recognising a national flexibility measure and applying it to domestically authorised branches located in the Member State authorised to apply the national flexibility measure. Where this happens, the Member State that recognised the measure must notify the Council, the Commission, the EBA, the ESRB and the Member State authorised to apply that measure. Where one or more Member States do not recognise the national flexibility measure, the Member State authorised to apply the measure may ask the ESRB to issue a recommendation as referred to in Article 16 of Regulation (EU) No 1092/2010.[164]

A.2 Experience with the use of the national flexibility package to date

To date, five Member States used the national flexibility measure under Article 458 of the CRR (see Table A.1 for an overview). Belgium activated measures under Article 458 of the CRR in 2014 and 2018, Finland and Cyprus in 2017, and France and Sweden in 2018. Four of these six measures adjusted risk weights for targeting asset bubbles in residential property, one measure liquidity requirements and one measure requirements for large exposures. So far, no measure has targeted the other possible options listed in Article 458(2)(d) of the CRR, namely the level of own funds, public disclosure requirements, the level of the capital conservation buffer or intra-financial sector exposures.

Although the majority of measures targeted residential real estate, the measures adopted by Belgium, Finland and Sweden differ in their main characteristics. All three countries used a slightly different definition of the targeted exposures. While Belgium and Finland concentrated on the location of the collateral, the Swedish measure targets obligors residing in Sweden. Belgium and Sweden use CRR definitions for the exposure class, but Finland uses a definition according to national law. Belgium decided to apply an add-on to all individual risk weights, while Finland and Sweden apply a risk weight floor at the portfolio level (15% in Finland and 25% in Sweden).

[163] Article 395 of the CRR.

[164] In this case the ESRB would issue a recommendation amending Recommendation ESRB/2015/2 on the assessment of cross-border effects of and voluntary reciprocity for macroprudential policy measures.

Most of the measures apply to all credit institutions that have the targeted exposures. While the Cypriot measure applied to all credit institutions, the Belgian, Finnish and Swedish measures apply to all credit institutions using the internal ratings-based (IRB) approach for calculating regulatory capital requirements (IRB credit institutions) as only the risk weights used by IRB credit institutions were considered too low. France, on the other hand, only applied the measure to systemically important institutions as they are the most likely to spill over to the rest of the financial system.

Table A.1
Overview of measures under Article 458 of the CRR

	Belgium	Cyprus	Finland	France	Sweden
Risk addressed	Overvaluation of property, household indebtedness	Cliff effect from transition from national liquidity requirements to the LCR	Household indebtedness	Exposure of banks to highly indebted large French non-financial corporations	Overvaluation of property, household indebtedness
Economic tool	Risk weight add-on	Add-on to the liquidity coverage requirement	Risk weight floor	Large exposure limit	Risk weight floor
Legal basis	Article 458(2)(d)(vi) of the CRR	Article 458(2)(d)(v) of the CRR	Article 458(2)(d)(vi) of the CRR	Article 458(2)(d)(ii) of the CRR	Article 458(2)(d)(vi) of the CRR
Designated authority	Nationale Bank van België/Banque Nationale de Belgique	Central Bank of Cyprus	Finanssivalvonta	Haut Conseil de Stabilité Financière	Finansinspektionen
National legal instrument used	Royal Decree issued by the Federal Government	Decision of the Central Bank of Cyprus	Decision by Finanssivalvonta	Decision by Haut Conseil de Stabilité Financière	Decision of Finansinspektionen
Targeted institutions	All IRB credit institutions	All credit institutions, and branches of non-EU banks	All IRB credit institutions	Systemically important institutions	All IRB credit institutions
Targeted exposures	Retail exposures secured by immovable property located in Belgium	No targeted exposures	Residential mortgage loans defined in accordance with the Finnish Consumer Protection Act	Exposures over €300 million to highly-indebted French non-financial corporations.	Retail exposures to obligors residing in Sweden secured by immovable property
Date of introduction	4 May 2018	27 November 2017	26 June 2017	11 May 2018	22 August 2018
Entry into force	30 April 2018	1 January 2018	1 January 2018	1 July 2018	31 December 2018
Envisaged period	Medium-term	1 year	Medium-term	Medium-term	Medium-term
Request for reciprocation	Yes	No	Yes	Yes	Yes

Source: ESRB.
Note: The information provided is based on the notifications sent by designated authorities to the ESRB.

Belgium: risk weight add-on for residential mortgage exposures

Belgium introduced a risk weight add-on of 5% in 2014 for retail mortgage exposures secured by residential immovable property, for which the collateral is located in Belgium. The measure applied to IRB credit institutions. The average risk weights calculated by IRB banks were very low due to the fact that no major crisis in the property market had been observed. The measure addressed the risk of a significant overvaluation of property prices in Belgium. It was introduced as a regulation by the Nationale Bank van België/Banque Nationale de Belgique (NBB/BNB) and legally adopted by a Royal Decree. It was a continuation of a similar measure adopted by the NBB/BNB in 2013 under national law. The measure was extended in 2016 for one year and finally expired on 28 May 2017.

In November 2017 the NBB/BNB reassessed the vulnerabilities in the residential real estate sector and concluded that an additional measure was warranted. The Federal Government asked the NBB/BNB to reassess the vulnerabilities in the residential real estate sector. In addition to the risk of overvaluation of property prices in Belgium, the level of household debt had significantly increased. Specific groups of highly indebted households were also identified. This supported the approval of a combined measure as described in the paragraph below.

In 2018 Belgium introduced a combined risk weight add-on for retail mortgage exposures secured by residential immovable property, for which the collateral is located in Belgium. The risk weight add-on is composed of: (i) a general, flat risk weight add-on of 5 percentage points and (ii) an additional proportionate risk weight add-on which is obtained as a fraction (33%) of the average microprudential risk weight of the bank's portfolio of retail mortgage exposures. The measure applies to IRB credit institutions and was introduced as a regulation by the NBB/BNB and legally adopted by a Royal Decree. Originally a new measure was envisaged to be adopted in 2017, but this proposal was rejected by the Federal Government of Belgium. The original, expired, measure was, for the time being, extended in the form of a non-binding bilateral recommendation.

Cyprus: add-on to the liquidity coverage requirement

Cyprus applied stricter liquidity requirements in the form of an add-on to the liquidity coverage requirement (LCR). Cyprus applied more stringent requirements under national law driven by the Cypriot banking sector's high reliance on customer deposits. Cyprus used Article 412(5) of the CRR to keep in place national liquidity requirements that are stricter than the LCR during the LCR phasing-in period (2015-2017). However, as of 1 January 2018, the CRR required all national liquidity requirements to be removed and the LCR was fully introduced. The LCR would, as a rule, result in substantially lower liquidity requirements compared with the national prudential liquidity requirements that are currently in place.

The measure aimed at ensuring a smooth transition from the national requirement to the LCR, avoiding a significant cliff effect. While the national liquidity requirements distinguished positions in the euro and foreign currencies, the LCR only applies to total currency positions. Furthermore, two types of liquidity ratios were in force in Cyprus: liquidity mismatch ratios and liquid assets ratios. In order to ensure a smooth transition to the LCR, the Central Bank of Cyprus started loosening its prudential liquidity requirements on 15 September 2017 and 31 December 2017. The LCR add-on extended the process of a gradual relaxation for an additional year.

Finland: risk weight floor for residential mortgage exposures

Finland activated a 15% risk weight floor for residential mortgage loans defined in accordance with the Finnish Consumer Protection Act. The risk weight floor applies to the average risk weight of the whole portfolio of residential mortgage loans secured by housing units in Finland and risk weights of individual loans can be lower. The measure only applies to IRB credit institutions, which apply low risk weights to mortgage loans compared with other Member States and the level of risk.

The main vulnerability is the high and increasing level of household indebtedness, especially among some groups of households. Two structural changes have contributed to the accumulation of housing debt: (i) the increase in the average maturity of new loans; and (ii) the increase in the average loan size. In addition, debt is concentrated in a relatively small group of most-indebted households. There were no indications of a significant and general overvaluation of residential property prices in Finland.

France: tighter large exposure limits for highly indebted large French non-financial corporations

France tightened the large exposure limits for highly indebted large French non-financial corporations (NFCs) to 5%. The measure applies to the institutions that have been identified as globally or otherwise systemically important (G-SIIs and O-SIIs) in France at the highest level of consolidation of the banking prudential perimeter. An NFC is considered highly indebted if it has a leverage ratio[165] that is greater than 100% and a financial charges coverage ratio[166] that is below three, calculated at the highest level of group consolidation. An NFC is considered large if a credit institution has original exposure to this NFC, or to the group of connected NFCs equal to or larger than €300 million.

The measure applies to NFCs whose ultimate parent is French as well as to French subsidiaries of foreign NFCs. For NFCs whose ultimate parent is French, the large exposure limit applies to the net exposures towards the entire group. For those NFCs with a registered office in France and belonging to a foreign group, the limit applies to the net exposures of NFCs with a registered office in France as well as any of their connected clients that have their registered office in France and all their subsidiaries (whether they have their registered office in France or not).

With the measure, the Haut Conseil de Stabilité Financière aims to strengthen the resilience of SIIs to the above-mentioned risk and send a warning signal regarding the increased leverage of French NFCs. Unlike in the euro area, the indebtedness of French NFCs has increased in recent years, mainly driven by rising indebtedness of large NFCs. In particular, the growth of outstanding issued debt securities has been an important driver of debt growth. The main motivation for introducing the measure is to preserve the overall resilience of systemically important French banks in the event of a default by large and highly indebted NFCs. Furthermore, it is envisaged that it will act as a signal to financial institutions and investors with respect to the risks associated with the increased leverage of large French NFCs.

[165] The leverage ratio is the ratio between total debt net of cash and equity.

[166] The financial charges coverage ratio is the ratio between, on the one hand, the value added plus operating subsidies less: (i) payroll; (ii) operating taxes and duties; (iii) other net ordinary operating expenses excluding net interest and similar charges; and (iv) depreciation and amortisation, and, on the other hand, interest and similar charges.

Sweden: risk weight floor for residential mortgage exposures

Sweden introduced a 25% risk weight floor for retail exposures to obligors residing in Sweden secured by immovable property. The risk weight floor applies to the exposure-weighted average risk weight for the whole portfolio of Swedish mortgages and not at an individual loan level. The measure only applies to IRB credit institutions, which apply low risk weights due to very low credit losses observed over a long period of time. An average risk weight floor of 25% for IRB credit institutions has been in place in Sweden under Pillar 2 since 2014. After the move of Nordea's headquarters from Sweden to Finland in 2018, Swedish authorities decided to apply Article 458 of the CRR instead of the Pillar 2 measure, which would no longer apply to Nordea. Changing the legal basis would maintain the effectiveness of the measure through reciprocity.

The Swedish measure aims to increase the resilience of the banking sector to the risks of overvaluation of residential property and high indebtedness of Swedish households. The main vulnerability of the Swedish financial system is the high and increasing level of household indebtedness. In addition, residential real estate prices in Sweden have been increasing over a long period and residential property appears to be significantly overvalued. Swedish banks are significantly exposed to the residential real estate sector and the majority of mortgages are offered at a variable interest rate. IRB credit institutions account for 95% of the mortgage market.

A.3 Reciprocation of measures under Article 458 of the CRR

In all cases except the Cypriot measure, the activating authority requested the ESRB to recommend reciprocation to other Member States. The Cypriot measure was clearly an institution-based measure targeting domestic institutions and therefore no reciprocity was necessary. For the other measures, the ESRB has recommended that other Member States reciprocate the activated measure.[167] A detailed description of the reciprocation of individual measures can be found in Section 2.9. The ESRB recommended the reciprocation of the French and Swedish measures in December 2018 and January 2019. The recommendations were published in the Official Journal of the EU in February and March 2019, respectively, and, therefore, the period for implementation is still ongoing. So far the ESRB has been notified by Finland that Finland has reciprocated the Swedish measure. The assessment below is based on the reciprocation of the two Belgian measures and the Finnish measure.

Five countries reciprocate measures under Article 458 of the CRR as a matter of principle. Portugal and Lithuania reciprocate all measures without applying any materiality threshold. Denmark also reciprocates as a matter of principle. While it reciprocated both Belgian measures without any materiality threshold, institutions with exposures below €1 billion were exempted from reciprocation of the Finnish measure. Croatia and Belgium also reciprocate as a matter of principle exempting institutions with exposures below the materiality threshold.

The situation in Member States differs in relation to reciprocating actions for exposures of branches and direct cross-border exposures. France, Luxembourg and Sweden apply the literal interpretation of Article 458(5) and reciprocating actions only directly affect branches in the activating Member State. In France, the Autorité de Contrôle Prudentiel et de Résolution was mandated to define and implement a macroprudential measure most suitable to ensure effective

[167] See the part of the **ESRB's website dedicated to reciprocity**.

reciprocity of the Belgian measure adopted in 2014. On the other hand, Belgium and the Netherlands adopted a broad interpretation and their reciprocating actions also include direct cross-border exposures. Most notifications to the ESRB do not explicitly specify whether reciprocating actions cover exposures of branches only or also direct cross-border exposures.

The materiality threshold applied by reciprocating authorities became more uniform after the ESRB started to recommend maximum materiality thresholds in 2017.[168] For the Belgian measure activated in 2014, reciprocating authorities applied different materiality thresholds: €1 million; €50 million; 2% share in the credit institution's portfolio. Six authorities reciprocated without any materiality threshold. After the introduction of the maximum materiality thresholds in 2017, their use became widespread. For the Finnish measure, five reciprocating authorities applied the recommended materiality threshold of €1 billion, while only Lithuania and Portugal reciprocated without any materiality threshold. For the new Belgian measure, all four reciprocating authorities did not apply any materiality threshold.

A.4 Conclusions

The relevant authorities of Member States have increasingly used Article 458 of the CRR to mitigate sources of systemic risk with the potential to have serious consequences for the financial system and for the real economy in those Member States. In particular, this macroprudential tool has been used to mitigate different types of systemic risk arising from different sources: increasing vulnerabilities in the real estate sector; a potential liquidity shock; high indebtedness of the non-financial corporation sector; etc.

The increase in the use of Article 458 of the CRR as a national flexibility measure can be explained by several factors. The use of a Pillar 2 measure was considered not to be adequate since it was considered to fall within the remit of ECB Banking Supervision for significant institutions in the banking union and was less efficient from the point of view of a signalling effect and policy transparency. In one case, a measure under Article 458 of the CRR explicitly replaced a previous Pillar 2 measure, when the latter was no longer considered effective in mitigating the systemic risk identified. Furthermore, the discussion on the review of the CRD package and the planned removal of Pillar 2 from the macroprudential toolkit led macroprudential authorities to pre-emptively disregard the use of Pillar 2 measures. Finally, the successful initial use of Article 458 of the CRR encouraged further use of national flexibility measures by relevant authorities in other Member States.

In general, the somewhat complex approval procedure has not proven to be a hindrance for authorities when activating measures under Article 458 of the CRR. In all cases, the EBA and the ESRB issued opinions on the national measures and the Commission decided not to propose to the Council an implementing act to reject the national flexibility measure within the envisaged period of three months. On the other hand, most of the measures are envisaged to be in place over the medium term. Consequently, the possibility to extend the measure for two years instead of one as laid out in the "banking package" is welcome in order to ease the procedural burden (see Special Feature C).

[168] Recommendation of the European Systemic Risk Board of 20 October 2017 amending Recommendation ESRB/2015/2 on the assessment of cross-border effects of and voluntary reciprocity for macroprudential policy measures (ESRB/2017/4).

In line with the principle of pre-emptive and effective action, Member States should be able to recognise measures under Article 458 of the CRR also for direct cross-border exposures. In order to ensure effective and consistent national macroprudential policy measures, it is important that the same set of macroprudential requirements apply to the same type of risk exposures in a given Member State, irrespective of the legal status and location of the financial service provider. In light of this, we welcome the proposed amendment of Article 458(5) of the CRR under the "banking package review", which would allow Member States to recognise national flexibility measures also for direct cross-border exposures (see Special Feature C).

Finally, some clarification on the current wording of Article 458(10) is warranted. Under this article, Member States are allowed to increase the risk weights for real estate and for the intra-financial sector beyond those provided in the CRR by up to 25% and to tighten the large exposure limit by up to 15%. While apparently straightforward, this wording has led to, to our knowledge, three different interpretations from experts working in the field: (i) risk weights can be increased to the value of 25% and the large exposure limit can be tightened to the value of 15% at maximum; (ii) risk weights can be increased by 25% of their current value and the large exposure limit can be tightened by 15% of their current value; (iii) risk weights can be increased by 25 percentage points and the large exposure limit can be tightened by 15 percentage points at maximum. This variation in interpretation could lead to very different outcomes as regards the regime of Article 458 of the CRR and, therefore, clarification of the legal text is necessary.

Special Feature B: Development of the concept of macroprudential stance[169]

The regular deliberations on the annual Review of Macroprudential Policy in the EU have consistently highlighted the need to develop a conceptual framework to support the discussion on macroprudential policy measures. In addition to promoting a common understanding, such a framework is seen as useful in improving the communication of implemented macroprudential policies and aims to help anchor expectations about systemic risk developments and future policy actions. Furthermore, such a framework may help overcome potential policy inertia in the face of rising financial stability risks. Against this background a mandate for a working group was established by ESRB member institutions with the aim of developing a first step towards a common framework for the macroprudential stance. Consequently, the ESRB's Instruments Working Group (IWG) its Expert Group on Macroprudential Stance prepared a report which outlines the initial considerations on the features of a macroprudential stance. This special feature provides a brief synopsis of the main concepts discussed in the report.[170]

The macroprudential stance establishes the relationship between macroprudential actions by policymakers and the objective of financial stability. The aim of the macroprudential stance assessment is to provide information on the extent to which macroprudential actions are sufficient and help achieve the financial stability objective within a changing risk environment.

The development of a framework for assessing the macroprudential stance is, however, challenging. Macroprudential policy is multi-dimensional both in terms of intermediate objectives and instruments, as well as financial sub-sectors, and it is difficult to identify clear and well-defined policy goals which are linked to metrics and potential target levels. Furthermore, given the early stage in the experience with and understanding of macroprudential policies, the development of a fully-fledged measure of the macroprudential stance will rely on the experience gained over the coming years.

B.1 A framework for the macroprudential stance

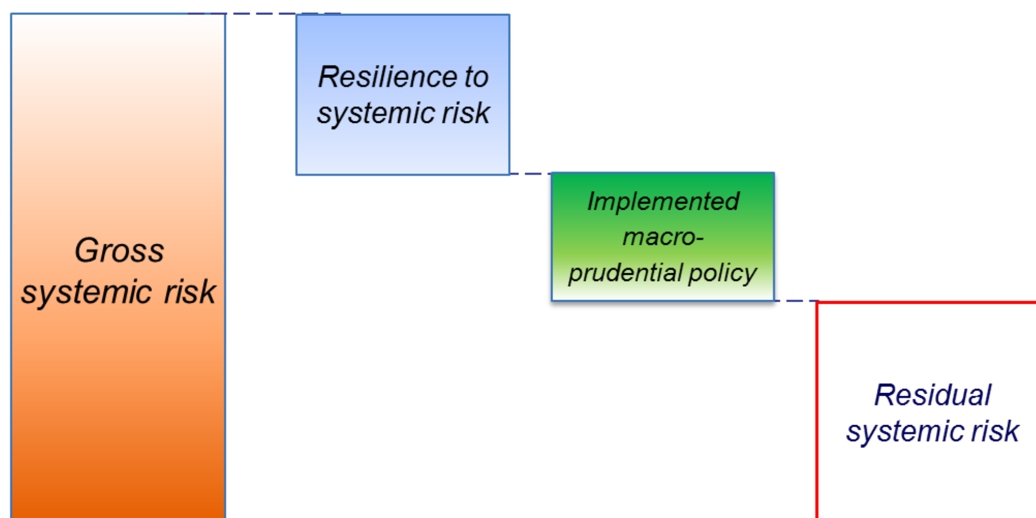
One possible way in which to define a macroprudential stance is to consider a risk-resilience framework. This framework would consider the assessment of gross systemic risk, accounting for available resilience in the economy and the financial system and then assessing the extent to which macroprudential policy instruments counter gross systemic risk or provide resilience. The relationship between systemic risk, resilience and macroprudential instruments can be conceptually depicted within a stylised risk-resilience framework (see Chart B.1).

[169] Prepared by Stephan Fahr (ECB), Christian Gross (ESRB Secretariat), Niamh Hallissey (Central Bank of Ireland) and Jean Quin (ESRB Secretariat).

[170] See **Features of a macroprudential stance: initial considerations**, ESRB, Frankfurt am Main, April 2019.

Chart B.1

Risk-resilience framework for the assessment of the macroprudential stance



Source: Expert Group on Macroprudential Stance.
Note: This is a stylised example for illustrative purposes and the relative size of the boxes is not meant to indicate the relative importance of any of the risk-resilience components.

The orange bar represents the gross systemic risk faced by the financial system and the economy. Gross systemic risk is a combination of macro-financial vulnerabilities or fragilities that may be a source of shock or systemic threat to the financial system. Vulnerabilities are the economic and financial conditions which would lead to amplifications should targeted shocks affect the vulnerable dimensions of economic agents. Externalities relating to strategic complementarities, fire sales and interconnectedness are sources of financial vulnerabilities, leading to an endogenous build-up of systemic risk, in particular in times of high uncertainty in financial markets. It should be noted that gross systemic risk may vary over time; however, a stance assessment takes place at a given point in time and therefore Chart B.1 provides a snapshot.

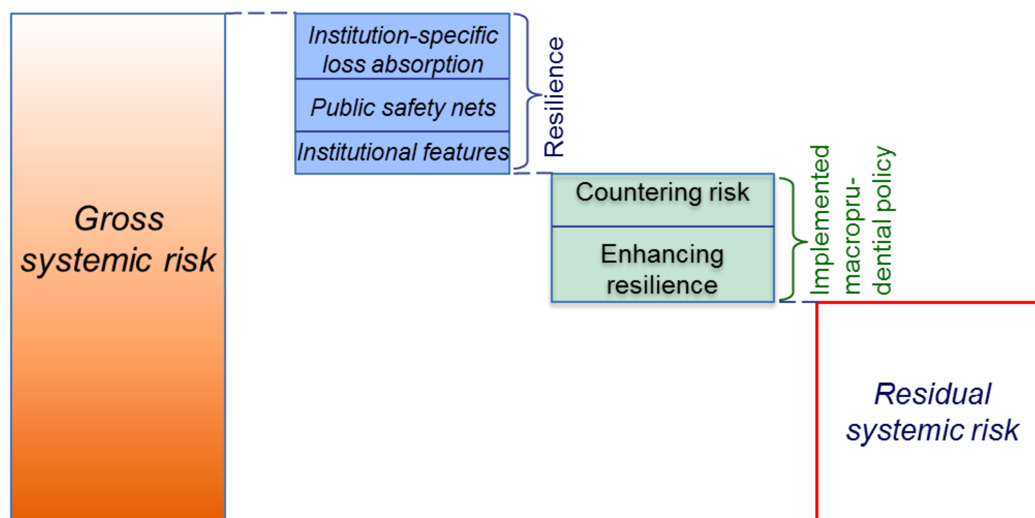
Resilience (blue bar) depicts the ability of the financial system and the economy to absorb the fallout when shocks and systemic risks materialise. In the context of the macroprudential stance framework, components that determine resilience to systemic risk include microprudential provisions targeting institution-specific loss absorption, public system-wide safety nets such as deposit insurance, and institutional features such as resolution funds.

The third component of the risk-resilience framework is the contribution of implemented macroprudential policies to addressing gross systemic risk and to raising resilience (green bar). These macroprudential policies can build resilience, e.g. in the form of capital or liquidity buffer requirements, or can mitigate risks by restricting exposures or lending conditions or by guiding behaviours and expectations.

Relating the amount of gross systemic risk to the available resilience in the system, including implemented macroprudential policy, gives an indication of the level of "residual systemic risk" (white bar with red frame). The risk-resilience framework considers the level of identified gross systemic risk relative to the availability of resilience within the economy and the financial system, while accounting for the appropriateness and effectiveness of macroprudential policy. A larger amount of this net residual systemic risk indicates that the gross systemic risk exceeds the available resilience and the implemented policies to a larger extent.

Chart B.2

Risk and resilience net of macroprudential policy impact



Source: Expert Group on Macroprudential Stance.
Note: This is a stylised example for illustrative purposes and the relative size of the boxes is not meant to indicate the relative importance of any of the risk-resilience components.

The three components of gross risks, resilience and policy are portrayed separately in an effort to distinguish contributions to the stance. It is understood that these components may not always be cleanly separated and may overlap in practice. For example, Chart B.2 presents a modified illustration of the risk-resilience framework in which macroprudential policy is netted into systemic risk and resilience parts to highlight the interaction between macroprudential policy, systemic risk and resilience. Chart B.2 illustrates, in a stylised manner, that macroprudential policy can either counter systemic risks directly, thus reducing the gross amount of systemic risk, or it can enhance overall resilience in the system. In order to structure policy discussions in macroprudential fora, the framework portrays the residual systemic risk component as a linear function of the three components. It should be borne in mind that this conceptual simplification is used purely for illustrative purposes and abstracts from the complex non-linear interactions observed in reality.

Using this risk-resilience framework, the macroprudential stance can be assessed as the difference between the observed level of residual systemic risk and a benchmark level of risk (a neutral level). The neutral level is considered to be the level of overall risks that the policymaker has tended to accept and which remains not covered by macroprudential policies or the overall available resilience.

If the residual systemic risk level exceeds the neutral level, this implies that the current macroprudential stance is loose; if the level of residual systemic risk is lower than the neutral level, the stance is tight. For a loose stance, implementing macroprudential policies either through risk-mitigation policies or resilience-building policies would reduce the gap between risk and resilience and bring the macroprudential stance back towards the neutral level. If the stance is considered tight, the ability of the financial system to provide products and services to the real economy may be curtailed excessively in the considered economic and financial environment. In turn, once shocks materialise, the systemic risk component declines and the macroprudential resilience mechanisms absorb the fallout. This would warrant the release of macroprudential instruments.

B.2 Macroprudential stance and policy action

The risk-resilience framework is a relative concept and provides policymakers with a choice between acting by addressing gross systemic risks or by adjusting resilience. The stance assessment itself does not identify the necessary course of action. A non-neutral macroprudential stance thus requires a separate assessment by policymakers on how best to address the level by targeting risks and/or by adjusting resilience.

The stance assessment is a point-in-time assessment which takes into account implemented policies and involves assessing risks and the need for policy action.[171] Only with the information on the exposures to types of risk, the resilience across sectors and the effectiveness of macroprudential instruments in countering risks and enhancing resilience can the policymaker assess which types of policies could alter (reduce or increase) the stance towards its neutral level. Once policy action has taken place, the stance will change and a new stance assessment can then be carried out in the future to include potential adjustments of the economy and the financial system.

The policy stance assessment does not attempt to identify an optimal target for macroprudential policy; rather, it forms the basis for considering "policy action". Chart B.3 illustrates how the stance assessment serves as input to the policy assessment. As previously portrayed in the discussion on the risk-resilience framework, a neutral stance implies that the implemented policies are considered sufficient to pursue the macroprudential policy objectives and no further action is required (unless a suboptimal mix of instruments and policies is in place; in this case, even a neutral stance could require further policy action). If, instead, the macroprudential stance is assessed to be tight or loose, further policy action could be considered. While the stance assessment itself focuses on describing the environment as loose, neutral or tight, additional information on the nature of any change compared with a previous period may help to guide policy actions.

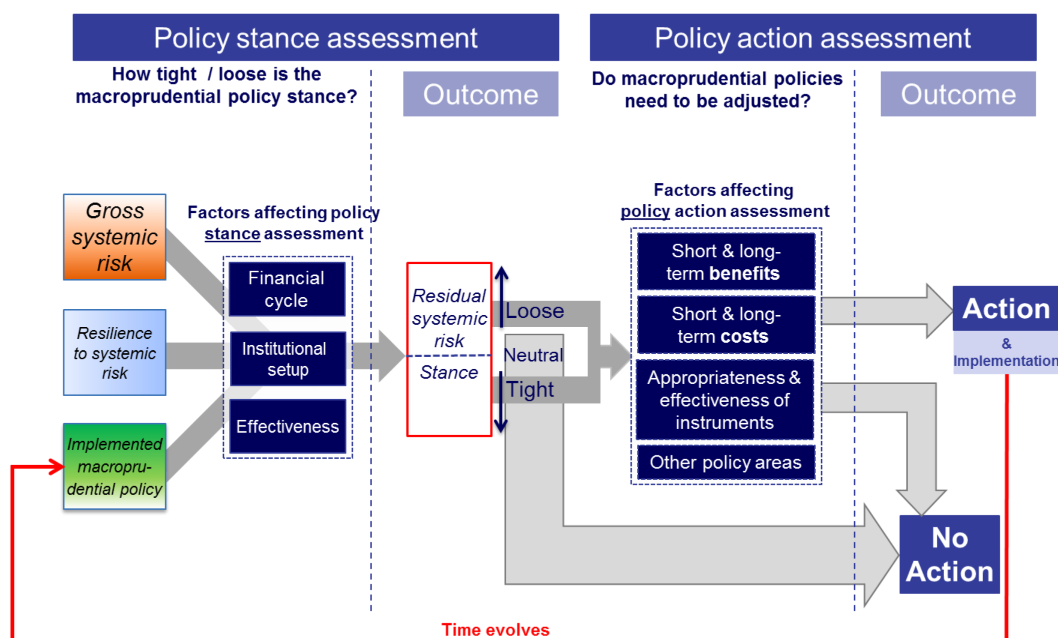
A policy action assessment would consider short- and long-run costs and benefits of adjusting the calibration of macroprudential instruments, either in terms of a release or a further tightening, depending on the policy stance assessment outcome. In addition, the policy action assessment takes into account the appropriateness and relative effectiveness of individual instruments for reaching the specified macroprudential objective. In relation to other policy areas, macroprudential policy can, on the one hand, mitigate financial stability risks generated by other policies (e.g. low monetary policy rates increasing risk-taking, or the lack of a fiscal backstop) or, on the other hand, where there are complementarities between macroprudential policy and other policies, changes in other policies may result in stronger or weaker calibrations for the macroprudential instruments.

Depending on the result of the policy assessment, a policymaker may decide if and what action should be taken. It is possible in this framework to have a loose macroprudential policy stance without additional policy action being taken if policymakers conclude that the overall costs of further action outweigh the benefits.

[171] In this framework, the stance assessment of implemented policy measures is separated from the assessment of costs and benefits of potential adjustments to macroprudential policy.

Chart B.3

The assessment of macroprudential stance and policy action



Source: Expert Group on Macroprudential Stance.

Note: This is a stylised example for illustrative purposes and the relative size of the boxes is not meant to indicate the relative importance of any of the risk-resilience components.

B.3 Factors affecting the stance and policy action assessments

Fundamental to the macroprudential policy framework is the role of policymakers' judgement of risks and resilience; judgement is therefore a key feature for the assessment of the macroprudential stance and the subsequent assessment of policy actions ("inaction bias"). There are a number of factors affecting the policy stance and policy action assessments which policymakers ought to consider, including their judgement of risks and resilience, the position of the financial cycle, policy preferences and interactions of macroprudential instruments with other policies. The two-tier process explicitly allows for an assessment of a non-neutral and macroprudential policy action that would not fully bring the residual systemic risk to its neutral level.

Multiple factors may prevent policymakers from taking policy action, even though the macroprudential stance assessment indicates a non-neutral stance. The lack of an appropriate instrument, combined with the absence of adequate alternative instruments to address the identified risk, would lead to the absence of policy action. It is also worth noting that whilst datasets for macroprudential purposes are continuously evolving, knowledge gaps remain in relation to systemic risk and its transmission channels, thereby generating uncertainty in the stance assessment, which could result in policy action not being taken. The fact that the benefits of macroprudential policy materialise after some delay and that the costs are more immediately visible makes short-term calculations of the net benefits difficult, which could in turn delay or even impede policy actions. Linked with this there could be uncertainty about the transmission and effectiveness of policy instruments. Short-run costs to particular groups in society may be obvious, whilst the potential benefits of macroprudential action would tend to come in the medium term and the beneficiaries may not be identifiable in advance, potentially creating inaction bias. Finally, the

interaction of macroprudential policy with other policy areas could imply strategic burden shifting and generate inaction on the part of macroprudential authorities.

Beyond the judgement of policymakers, the relative choice when selecting policies that address gross systemic risks or adjust resilience is influenced by the position of the financial cycle as this has an impact on the relative costs and benefits of the policies in the short and medium term. This raises an important policy question on the timing and the interplay of these two types of macroprudential policies: those that aim at enhancing resilience and those that aim at moderating the financial cycle. For instance, a relevant question is whether greater resilience is needed when the amplitude of the financial cycle is large compared with when it has been dampened by cycle-moderating macroprudential policy instruments. In addition, the emphasis on the two types of macroprudential policy instruments should vary over the financial cycle. In particular, resilience-enhancing macroprudential policies are likely to be most effective when losses in a crisis are expected to be large.

Policy preferences matter for various elements of the macroprudential policy stance. One aspect for which policy preferences may influence the stance assessment is the horizon over which the target has to be met. Policy lags can be understood as the time before policy measures become effective in countering risks or enhancing resilience. Longer policy lags mean that instruments have to be tightened or loosened more decisively to achieve the same policy stance. Another aspect is policy preferences regarding the volatility of the instrument versus the target. A macroprudential authority may have a preference for adjusting measures gradually in an attempt to reduce the economic cost of an increase in the buffer or when the inherent uncertainty in assessing the degree of risk to bank capital is a key concern. Preferences also inform the hierarchy of different (intermediate) targets and the selection of instruments.

Macroprudential policy can interact with monetary policy and so the macroprudential stance is affected by the level of interest rates and liquidity conditions. To assess the macroprudential stance, it is therefore important to take into account the implications for systemic risk of the overall conditions prevailing in the financial system. Whilst monetary and macroprudential policy have the capacity to influence both price and financial stability conditions, they remain distinct and separate policies.

Macroprudential policy also has the capacity to interact with microprudential policy. Micro- and macroprudential policies operate to a large extent through similar tools that affect the same variables (capital, liquidity, limits to exposure concentration, etc.), and therefore benefit from being coordinated.[172] Accordingly, it is the overall level of prudential requirements that affects banks' capacity to finance the real economy, which is particularly relevant in economies that rely heavily on bank credit such as the euro area. It could therefore be useful to think in terms of an "overall prudential stance".

Other policies outside the remit of the macroprudential authorities may be accounted for in the macroprudential stance. Economic policies do affect the risks and resilience of the financial system and thereby are relevant to achieving financial stability objectives, even if macroprudential authorities cannot influence these policies.

[172] See Alessandri, P. and Panetta, F., "**Prudential policy at times of stagnation: a view from the trenches**", *Occasional Paper Series*, No 300, Banca d'Italia, Rome, December 2015.

B.4 Conclusion

The concepts outlined in this special feature present some initial considerations on the development and use of a common framework for the macroprudential policy stance. Such a framework, if successfully implemented, can help support macroprudential policymakers in their decision-making process to ensure sufficient and appropriately targeted macroprudential policies.

It is envisaged that the work on the conceptual aspects of the macroprudential stance framework would be further developed into an operational framework over the medium term. Macroprudential authorities could use such a framework when conducting their assessment of risk and resilience and when analysing the appropriateness of their macroprudential responses. This requires the development of a quantitative concept which is transparent and flexible enough to allow and encourage implementation by national authorities.

In order to further develop the concepts presented, institutional cooperation within the ESRB membership and working groups would be key. It is envisaged that operationalising the macroprudential stance framework will have a significant and positive impact on the progression and understanding of macroprudential policy across Europe.

Special Feature C: Upcoming changes to the macroprudential provisions in EU banking legislation[173]

In December 2018, the Council and the European Parliament agreed to amend the Capital Requirements Regulation and Directive (CRR/CRD IV) as part of a broader overhaul of the EU's prudential and resolution rules for banks ("banking package").[174] These reforms, sometimes also referred to as the "risk-reduction package", aim to make the banking system safer and are part of the wider effort to complete the banking union. They complement key policy initiatives on risk sharing, notably the proposals for a European deposit insurance scheme and for a backstop to the Single Resolution Fund.

The banking package includes a number of targeted improvements to the macroprudential provisions in CRR/CRD IV.[175] These improvements reflect the priorities outlined by the ESRB in its response to the Commission's public consultation on the review of the macroprudential policy framework and in its opinion to the European Commission on structural macroprudential buffers.[176]

This special feature presents the main changes to the macroprudential provisions in CRR/CRD IV:

- streamlining of the Pillar 2 framework, eliminating the macroprudential use of Pillar 2;
- increased flexibility in the use of macroprudential instruments, notably the systemic risk buffer (SyRB) and the buffer for other systemically important institutions (O-SIIs);
- clearer delineation of the scope of the SyRB and the O-SII buffer;
- clarification of the roles and responsibilities of authorities when applying measures to real estate exposures on the basis of Articles 124 and 164 of the CRR;
- streamlined activation and reciprocation procedures of macroprudential instruments;
- changes relating to the G-SII buffer requirements and the G-SII score methodology.

173 Prepared by Stan Maes, Sergio Masciantonio and Rocío Villegas Martos (European Commission). Any views expressed in this special feature are those of the authors and do not necessarily reflect those of the European Commission.

174 The banking package contains changes to the Capital Requirements Directive (Directive 2013/36/EU, OJ L 176, 27.6.2013, p. 338), the Capital Requirements Regulation (Regulation (EU) No 575/2013, OJ L 176, 27.6.2013, p. 1), the Bank Recovery and Resolution Directive (Directive 2014/59/EU, OJ L 173, 12.6.2014, p. 190) and the Single Resolution Mechanism Regulation (Regulation (EU) No 806/2014, OJ L 225, 30.7.2014, p. 1), and is expected to be adopted at the European Parliament plenary session in April 2019.

175 The new macroprudential provisions will enter into force 20 days after their publication in the Official Journal and will start to apply 18 months after the date on which they enter into force. The banking package contains important *microprudential* changes, such as the introduction of a binding leverage ratio to prevent excessive leverage, a binding net stable funding ratio to address excessive reliance on short-term wholesale funding, minimum loss-absorbency capacity requirements for G-SIIs, more stringent large exposure limits for G-SIIs, a mandatory requirement to establish an intermediate parent undertaking (IPU) for large third-country banking groups operating in the EU, further harmonisation of reporting obligations for activities of branches of third-country banks, and more risk-sensitive capital requirements in the areas of market risk and counterparty credit risk, and for exposures to central counterparties.

176 **European Commission's public consultation on the review of the EU macroprudential framework**, European Commission, Brussels, July 2016; **the ESRB's response to the European Commission's public consultation on the review of the EU macroprudential framework**, ESRB, Frankfurt am Main, 24 October 2016; **the ESRB's Opinion to the European Commission on structural macroprudential buffers**, ESRB, Frankfurt am Main, December 2017.

C.1 Elimination of the macroprudential use of Pillar 2

The CRD IV allows for the macroprudential use of Pillar 2. Microprudential supervisors are in charge of carrying out the Supervisory Review and Evaluation Process (SREP) and of setting Pillar 2 supervisory requirements. Different practices have been observed regarding the macroprudential use of this tool, partly due to different institutional set-ups for macroprudential policy in the Member States. Most Pillar 2 measures addressing systemic risks have been applied to cross-border banking groups for which a college of supervisors is established, and therefore require a joint decision by all competent authorities, involving a high degree of supervisory coordination and cooperation. However, macroprudential authorities are not always involved in these decisions.

The banking package turns Pillar 2 into a purely microprudential tool. A number of changes to the Pillar 2 framework clarify its institution-specific nature and further streamline its application.[177] This will be offset by increased flexibility in the use of other macroprudential tools, as explained below. This clarification will enhance accountability in the use of Pillar 2 and better delineate the respective roles of the microprudential and macroprudential authorities. Clearly separating macroprudential and microprudential tools in terms of their objectives and procedures is also a safeguard against a double-counting of risks.

C.2 Increased flexibility in the use of the systemic risk buffer and O-SII buffer

The use of the SyRB is made more flexible, allowing the possibility to apply it to sectoral exposures. In addition to the application of the SyRB to all exposures, four separate sectors are specified for its application: residential real estate, commercial real estate, exposures to non-financial corporations excluding real estate (RE) and exposures to households excluding RE.[178] Authorities will then be able to apply different SyRB rates to different sets of exposures. In addition, it will be possible to apply the SyRB to specific subsets of these sectors as defined by future EBA guidelines to be developed in cooperation with the ESRB. Allowing for the use of the SyRB on a (sub-)sector of exposures will allow for more targeted use of the instrument. Authorities will be able to address risks developing in a specific part of their financial systems. Flexible application of the SyRB to sectoral exposures is also facilitated by removing the reference to "long-term non-cyclical" systemic risks. SyRB rates exceeding 5% can only be imposed if authorised by the Commission, after having taken into account the opinions of the ESRB, and, potentially, the EBA.

The caps on the O-SII buffer rate levels are raised. The cap on the O-SII buffer rate at the level of the parent institution is raised from 2% to 3% of Common Equity Tier 1 (CET1) capital as a percentage of risk-weighted assets. Authorities have the possibility of exceeding this cap, subject to an approval process involving the Commission, the ESRB and the EBA. The cap at the subsidiary level is also raised.[179] Under CRD IV provisions the SyRB has been used in some cases to address risks for which the O-SII buffer had been designed (by making it possible to exceed the O-SII buffer

[177] The banking package, among other things, introduces to the CRD V the concept of Pillar 2 guidance, which is already broadly used by EU supervisors, and provides for the mandatory disclosure of binding Pillar 2 capital requirements.

[178] It will remain possible to apply the SyRB to all exposures, or – consistent with the CRD IV – to domestic or foreign exposures.

[179] The cap at the subsidiary level in the CRD IV corresponds to the higher level of 1% and the O-SII buffer rate at the parent level. In the CRD V it is the lower level of the O-SII buffer rate at the parent level plus 1 percentage point, and 3% or the higher buffer rate authorised at the parent level.

cap of 2%, also see Table 6 in Section 2.6). The increased O-SII buffer cap of 3% will therefore allow national authorities to use the most appropriate instrument to target risks stemming from the systemic importance of institutions. The higher cap for subsidiaries also allows "host" authorities to better address risks posed by the systemic importance of these subsidiaries. At the same time, the cap ensures that a level playing field at the EU level is maintained as subsidiaries will not be subject to buffers that are significantly higher than those imposed at the parent level, thus ensuring a higher degree of homogeneity of capital requirements within banking groups.[180]

C.3 Clarifying the scope of the systemic risk buffer

The scope of the SyRB is narrowed to exclude its application to risks stemming from systemically important institutions. This will improve the clarity and consistency of the overall macroprudential framework. Reflecting its flexible character under the CRD IV, the SyRB is used for a variety of purposes under the current provisions, including addressing risks stemming from systemically important institutions (thereby circumventing the existing cap on the O-SII buffer rate).[181] The use of the SyRB for such purposes harms the transparency of the framework. In the CRD V, the SyRB is hence only allowed to address risks in the banking sector that do not relate to the group's systemic importance at the global or domestic level (O-SII/G-SII buffers).

The G-SII/O-SII buffer and SyRB are made additive. The delineation of their scope implies that the SyRB and G-SII/O-SII buffers will be used to target separate risks. The justification for the "higher of" no longer exists and the buffers can, as a result, be deemed additive in all cases.

An overall cap of 5% for the cumulative SyRB and O-SII/G-SII buffer rates is introduced as a safeguard. The additive nature of the SyRB and the G-SII/O-SII buffer can potentially lead to high overall buffer requirements that could have a negative impact on the level playing field in the EU as a whole. This additional safeguard thus ensures that single market concerns are duly taken into account when increasing buffer requirements. This overall cap may only be exceeded subject to an authorisation procedure involving the Commission, the ESRB and the EBA.

C.4 Clarification of the roles and responsibilities of authorities in tackling financial stability risks linked to real estate exposures (Articles 124 and 164 of the CRR)

The roles of competent and designated authorities are clarified to facilitate the application of measures to address real estate risks under Articles 124 and 164 of the CRR.[182] This clarification also seeks to improve the cooperation and coordination between microprudential and macroprudential authorities. Member States will be able to entrust either the competent or the designated authority in their jurisdiction with activating measures on the basis of these two articles, depending on national institutional arrangements. Given the dual (micro- and macroprudential)

[180] The calibration of the O-SII buffer rate is left at the discretion of national authorities. However, the EBA has been tasked to report to the European Commission, after having consulted the ESRB, on the appropriate methodology for designing and calibrating O-SII buffer rates.

[181] Given the residual nature of this tool, authorities are granted significant flexibility in the use of the SyRB. It can be applied to all or to domestic or foreign exposures, and to the entire banking system or to a subset of banks.

[182] The use of these articles is limited to date. Articles 124 and 164 of the CRR provide for instruments to address real estate-related risks. National authorities may set higher risk weights (up to 150%) for banks using the standardised approach for credit risk modelling or impose stricter loss-given-default (LGD) parameters for banks using the internal ratings-based approach for credit risk modelling on exposures secured by mortgages on immovable property.

nature of the two articles, a sound framework for coordination and exchange of information between competent and designated authorities is envisaged. The macroprudential nature of these articles is maintained and authorities should only make use of the tool when they identify a financial stability risk.

The scope of Articles 124 and 164 of the CRR is made more flexible. National authorities will be able to apply the two articles to one or more property segments located in one or more parts of a Member State's territory.

The coordination requirements are clarified and a stronger role is given to the ESRB, reflecting the macroprudential nature of these measures. The EBA and the ESRB will have the power to issue opinions regarding the planned use of either of the two articles. The EBA remains responsible for developing Regulatory Technical Standards (RTS) on the assessment of the adequacy of risk weights (RWs) and loss-given-default (LGD) parameters, but will be required to cooperate closely with the ESRB when developing them. The new provisions provide for an ESRB recommendation on how to assess the adequacy of RWs and LGD from the perspective of financial stability. These amendments should ensure that the tools are used in a consistent manner throughout the EU without creating undue activation costs.

C.5 Streamlined activation and reciprocation procedures for macroprudential instruments

A number of changes are made to the activation procedures. The existing macroprudential toolbox contains a number of coordination requirements at the EU level aimed at fostering transparency and cross-border coordination and cooperation, thereby ensuring the integrity of the Single Market. The changes aim to lighten the administrative burden without hampering the transparency or effectiveness of the framework.

The ESRB's role in the transmission of information on planned macroprudential measures is strengthened. The ESRB will become a notification "hub" and will be responsible for disseminating notifications to the European Commission, the EBA and the competent and designated authorities of the Member States concerned.[183] Furthermore, the important role of the ESRB in the coordination of macroprudential measures is emphasised.

The notification procedure for the countercyclical capital buffer (CCyB) is simplified. The quarterly assessment of the CCyB rate is maintained but an official notification is only required when the buffer rate is effectively changed.

The notification procedures for the SyRB are simplified. In the event of a reduction in the SyRB rate, there is an information requirement only. In the event of an increase, additional coordination requirements or authorisations will only be applicable above certain thresholds.

EU coordination requirements for the SyRB are clarified. For a combined SyRB rate between 3% and 5% on any set of exposures, a Commission opinion is required, and national authorities will need to justify any deviation from that opinion.[184] SyRB rates exceeding 5% can only be imposed if

[183] The ESRB is not a legal entity and hence the legal obligation to notify will remain with the Member States.

[184] Where an institution subject to an SyRB is a subsidiary whose parent is established in another Member State, the Commission and the ESRB shall each provide a recommendation on the measure. In the event of a negative recommendation by both the Commission and the ESRB, and in the event of a disagreement on the SyRB rate between the authorities of the subsidiary and of the parent, the case may be referred to the EBA for assistance.

authorised by the Commission, after having taken into account the opinions of the ESRB, and, potentially, the EBA. Given that the SyRB will then be applicable to different sets of exposures that may sometimes overlap, the aggregated SyRB to which any set of exposures is subject will be relevant for meeting these thresholds and the 5% overall cap for the cumulative use of SyRB and O-SII/G-SII buffers (discussed above). This will enhance transparency and balance the flexibility of the application of the sectoral SyRB.

The "pecking order" for the SyRB is simplified.[185] References to Pillar 2 are removed as Pillar 2 can no longer be used to address macroprudential risk. As mentioned earlier, it is clarified that the SyRB can no longer be used to address risks specific to systemically important banks. In addition, given the removal of the reference to "long-term non-cyclical" systemic or macroprudential risks, and the potential applicability of the SyRB to address cyclical risk, it is clarified that the SyRB cannot be used to address risks that could be covered by the CCyB, in order to avoid overlaps with the latter.

The reciprocation mechanism for SyRBs activated by other Member States is clarified. The reciprocated SyRB will be cumulative with the domestically activated SyRB if the buffers address different risks. If they address the same risk, only the higher buffer shall apply. Reciprocated SyRBs will not count as regards the activation procedure for the 3% threshold mentioned above.

The prolongation of temporary measures under Article 458 of the CRR is facilitated and the scope for reciprocation is extended to eliminate any ambiguity.[186] National measures adopted under Article 458 of the CRR can be extended for a period of two years, as opposed to the current limit of one year. This will make the tool more usable, while preserving its temporary character and the incentives to look at other more long-term and structural tools. The "pecking order" for Article 458 of the CRR is clarified by removing the reference to Pillar 2. The reciprocation scope of Article 458 of the CRR is clarified to also include direct cross-border exposures of banking groups located in other Member States to the activating Member State.

C.6 Revised G-SII buffer requirements and G-SII score methodology

A leverage ratio buffer for G-SIIs is introduced, amounting to 50% of the risk-based G-SII buffer level, in line with the December 2017 Basel Agreement.[187] It will apply on top of the binding 3% leverage ratio requirement. The leverage ratio buffer is necessary to ensure that the leverage ratio continues to act as an appropriate backstop to the risk-based capital requirements for G-SIIs.

An additional overall G-SII score is introduced to reflect the advances in the cross-border bank resolution framework within the banking union. The additional G-SII score excludes a group's activities across banking union Member States in the cross-jurisdictional activity indicator of the overall G-SII score.[188] Based on this additional overall G-SII score, the relevant supervisory

[185] The residual nature of the SyRB requires that a pecking order should be respected before its activation.

[186] National flexibility measures under Article 458 of the CRR are a special set of measures allowing national authorities to impose a variety of prudential requirements to address systemic risks. These instruments may only be used if the national authority can establish that the measure is necessary, effective and proportionate and that any other measure specified in the common macroprudential framework cannot adequately address the systemic risk ("pecking order").

[187] The G-SII buffer addresses the risks posed by systemically important banks ("too big to fail") at the global level. This buffer and other additional requirements applicable to G-SII designation are part of the Basel III framework. The leverage ratio buffer will become applicable on 1 January 2022, in line with the Basel Agreement.

[188] The five criteria that are considered for the G-SII score of a bank are harmonised and cover size, interconnectedness, lack of substitutability of its financial services provision, complexity and cross-jurisdictional activities.

authority may, exercising its supervisory judgement, allocate a G-SII to a lower bucket. The additional methodology can, however, never result in a bank being removed from the G-SII list. Therefore, the designation as a G-SII and the corresponding tighter requirements remain unaffected.

The additional methodology is meant to reflect the major institutional advances in terms of banking resolution made in the banking union. Within the banking union, authorities effectively work together as part of a common resolution mechanism in resolution planning and in resolution itself (within the same resolution teams). The reason for having the cross-jurisdictional activity indicator in the G-SII framework is that spillover effects of bank failures are larger and that greater cross-border activity makes resolution lengthier and more difficult due to the need to coordinate. The major institutional and legal advances in bank resolution in the banking union reduce the relevance of banking union cross-border exposures as an indicator of resolution complexity. This means that, unlike cross-border exposures between jurisdictions that do not share a common bank resolution framework, they may no longer be a good proxy for systemic importance.

C.7 Requirement to review the macroprudential framework in banking

The Commission is required to assess the macroprudential framework in banking by 30 June 2022 and every five years thereafter. The Commission will in particular be required to assess: (i) whether other instruments, such as borrower-based instruments, should be added to the EU macroprudential toolset; (ii) whether the leverage ratio buffer requirement should be extended to O-SIIs; (iii) whether the current voluntary reciprocity of macroprudential instruments should be made mandatory; and (iv) how national macroprudential authorities can be empowered with tools allowing them to address new emerging systemic risks arising from the exposure of credit institutions to the non-bank financial sector.

Annex 1: Material third countries

Table A.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 exposures				Risk-weighted exposures				Exposures in default				Materiality
	Q4 2017	Q3 2017	last 8Q	last 12Q	Q4 2017	Q3 2017	last 8Q	last 12Q	Q4 2017	Q3 2017	last 8Q	last 12Q	
US	7.49%	7.66%	7.93%	8.03%	6.79%	7.04%	7.40%	7.74%	1.70%	1.82%	2.12%	2.06%	Confirmed
HK	2.36%	2.35%	2.36%	2.34%	1.68%	1.65%	1.64%	1.62%	0.24%	0.24%	0.24%	0.20%	Confirmed
SG	0.97%	0.94%	0.99%	1.01%	0.65%	0.64%	0.64%	0.66%	0.32%	0.26%	0.29%	0.24%	Retained
CH	0.91%	0.91%	0.94%	0.93%	0.72%	0.72%	0.73%	0.71%	0.26%	0.31%	0.31%	0.29%	Retained*
TR	0.89%	0.92%	1.02%	1.04%	1.39%	1.46%	1.66%	1.64%	0.66%	0.59%	0.63%	0.61%	Confirmed
CN	0.82%	0.80%	1.03%	1.22%	1.34%	1.31%	1.70%	2.01%	0.10%	0.15%	0.17%	0.16%	Confirmed
MX	0.78%	0.83%	0.81%	0.80%	0.99%	1.11%	1.09%	1.08%	0.37%	0.39%	0.37%	0.36%	Not identified
BR	0.77%	0.80%	0.88%	0.92%	1.20%	1.25%	1.37%	1.42%	1.13%	1.10%	1.15%	1.05%	Retained
KY	0.66%	0.68%	0.92%	1.00%	1.07%	1.08%	0.98%	0.93%	0.20%	0.19%	0.26%	0.29%	Not identified
RU	0.40%	0.40%	0.42%	0.44%	0.56%	0.56%	0.61%	0.64%	0.42%	0.46%	0.51%	0.51%	Retained

Source: 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 as a percentage of respective total original credit exposures of the EU banking sector vis-à-vis the real economy. Third countries are ranked according to original credit exposures to the real economy in Q4 2017. Numbers above the 1% threshold for identification established by Decision ESRB/2015/3 are highlighted in orange. Numbers below the 1% threshold for deletion established by Decision ESRB/2015/3 are highlighted in green. (*) Materiality assessments marked with an asterisk indicate the use of discretion to retain a country on the list of material third countries even though the criteria for deletion were fulfilled.

Table A.1.2

Methodologies used by Member States for identifying material third countries

Member State	ESRB methodology			Latest data	Comments
	Calculation	Threshold	Data		
AT	● (green)	● (green)	● (green)	Q1 2018	Statistical approach overlaid with expert judgement
BE	● (green)	● (green)	● (green)	Q4 2017	Statistical approach overlaid with expert judgement
BG	● (green)	● (green)	● (green)	Q4 2017	Additional inclusion of intragroup exposures
CY	● (green)	● (green)	● (green)	Q4 2017	
CZ	● (green)	● (green)	● (green)	Q4 2017	
DE	● (green)	● (green)	● (green)	Q4 2017	Combination with external position data using a 3% threshold
DK	● (green)	● (orange)	● (green)	Q1 2018	Use of 2% threshold; statistical approach overlaid with expert judgement
EE	● (green)	● (green)	● (green)	Q4 2017	
ES	● (green)	● (green)	● (green)	Q4 2017	Use of additional COREP data items providing a larger coverage
FI	● (green)	● (green)	● (green)	Q1 2018	Statistical approach overlaid with expert judgement
FR	● (green)	● (green)	● (green)	Q4 2017	Statistical approach overlaid with expert judgement
GR	● (green)	● (green)	● (green)	Q4 2017	Combination of the ESRB metrics with additional proxies thereto
HR	● (green)	● (green)	● (orange)	Q4 2017	Missing risk-weighted exposures; combination with analysis of unconsolidated risk-weighted exposures for the private sector
HU	● (green)	● (green)	● (green)	Q1 2018	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 to ESRB metrics used; statistical approach overlaid with expert judgement
IE	● (orange)	● (green)	● (green)	Q3 2017	Materiality if two metrics exceed threshold and based on most recent quarter and average over preceding four quarters. Use of COREP templates C 07.00 and C 08.01 as a cross-check
IT	● (green)	● (green)	● (green)	Q4 2017	
LT	● (green)	● (green)	● (green)	Q4 2017	Statistical approach overlaid with expert judgement
LU	● (green)	● (green)	● (green)	Q4 2017	Statistical approach overlaid with expert judgement
LV	● (green)	● (orange)	● (orange)	Q1 2018	Use of 2% threshold; decision not to use defaulted exposures
MT	● (green)	● (green)	● (green)	Q4 2017	Additional exposures are taken into account
NL	● (green)	● (green)	● (green)	Q1 2018	Statistical approach overlaid with expert judgement
PL	● (green)	● (green)	● (green)	Q4 2017	Statistical approach overlaid with expert judgement
PT	● (green)	● (green)	● (green)	Q4 2017	
RO	● (green)	● (green)	● (green)	Q4 2017	Additional use of monetary statistics and further indicators
SE	● (green)	● (green)	● (green)	Q1 2018	Statistical approach overlaid with expert judgement
SI	● (green)	● (orange)	● (orange)	Q4 2017	Use of 5% threshold; decision not to use defaulted exposures
SK	● (green)	● (green)	● (orange)	Q1 2018	Decision not to use defaulted exposures
UK	● (grey)	● (grey)	● (grey)	Q4 2017	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	● (green)	● (green)	● (green)	Q4 2017	Use of additional COREP data items providing a larger sample
NO	● (green)	● (green)	● (green)	Q1 2018	

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 dots indicate that the methodology is based on the ESRB methodology, but that differing metrics, criteria or thresholds are used, which are explained in the column "Comments". Grey dots indicate that a different methodology is used.

Annex 2: Active residential real estate instruments in Europe

Table A.2.1

Collateral stretch instruments

Member State	Limit	Scope	Basis for measure
Austria	LTV: 80%	All credit providers operating in Austria, including branches	Recommendation
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	All credit institutions authorised and operating in Cyprus, including branches	Binding regulation
Czech Republic	LTV: 90%; the share of loans with an LTV of 80%-90% is limited to 15% per quarter, 60% for buy-to-let	All credit providers	Recommendation
Denmark	LTV: 95%; for mortgage credit institutions	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	LTC: 90%[189], 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)	All businesses operating in Finland, including the branches of foreign credit institutions	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	All mortgage lenders as long as credit is provided to personal individuals or households	Binding regulation
Ireland	LTV: 80% for second-time and subsequent buyers (20% of non-FTB new lending allowed above the limit); 90% for first-time buyers (5% of new lending to FTBs allowed above the limit); 70% for buy-to-let lending (10% of new lending for BTL allowed above the limit)	All regulated financial service providers. The regulations apply to housing loans secured on residential property in Ireland	Binding regulation
Latvia	LTV: 90%; 95% for loans covered by a state guarantee under the Law on Assistance in Resolution of Dwelling Issues	All lenders (both bank and non-bank, including branches)	Binding regulation
Liechtenstein	LTV: 80%	Credit institutions that issue mortgages in Liechtenstein	Binding regulation
Lithuania	LTV: 85%	All housing credit providers as long as credit is provided to consumers	Binding regulation
Netherlands	LTV: 100%	All credit providers operating in the Netherlands, including branches	Binding regulation

[189] As of 1 July 2018, the maximum loan-to-collateral (LTC) will be lowered to 85%.

Country	Instrument	Scope	Legal form
Norway	LTV: 85%; 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, DTI, 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 or collateralised with funds from a bank account, government or NBP securities	Banks	Recommendation
Portugal	LTV: 90%for new credit for own and permanent residence; 80% for new credit for purposes other than own and permanent residence; 100% for purchasing immovable property held by the credit institutions themselves and for property financial leasing agreements. Collateral is the minimum of the purchasing price and appraisal value[190]	All credit institutions and financial companies that have head offices or branches in the Portuguese territory	Recommendation
Romania	LTV: 85% for local currency-denominated loans, 80% for FX loans granted to hedged borrowers, 75% for EUR-denominated loans granted to unhedged borrowers, and 60% for other FX loans granted to unhedged borrowers; 95% for loans granted through the governmental programme "Prima Casă", irrespective of the currency	Bank and non-bank financial institutions	Binding regulation
Slovakia	LTV: 90% (down from 100%), with no more loans with LTV>90% and the share of loans with LTV>80% to reach 30% by the end of 2018 and 20% by the end of 2019	All credit providers (which includes branches) operating in Slovakia and providing housing loans	Binding regulation
Slovenia	LTV: 80%	Banks and savings banks, including branches of foreign banks	Recommendation
Sweden	LTV: 85%; amortisation requirement of 1% if LTV>50% and 2% if LTV>70%	All credit institutions operating in Sweden, including the branches of foreign credit institutions	Binding regulation

Source: ESRB.
Notes: Table refers to residential real estate instruments that were active in 2018 but might have been implemented earlier. Additionally, instruments that have been publicly disclosed and are set to come into force in 2019 are also included. Amortisation requirements have been included both under the income stretch and the collateral stretch categories.

[190] Applicable as of 1 July 2018.

Table A.2.2
Household/income stretch instruments

Member State	Limit	Scope	Basis for measure
Austria	DSTI between 30% and 40%	All credit providers operating in Austria, including branches	Recommendation
Cyprus	DSTI: limit of 80% of the borrower's net disposable income should not be exceeded (65% for foreign currency loans)	All credit institutions authorised and operating in Cyprus, including branches	Binding regulation
Czech Republic	DSTI: upper limit of 45%; may be exceeded for 5% of the total amount of retail loans secured by residential property, in justifiable cases (i.e. a high probability of a loan repayment is identified)	All credit providers	Recommendation
	DTI: upper limit for the DTI ratio of 9 (of the applicant's net annual income); may be exceeded for 5% of the total amount of retail loans secured by residential property, in justifiable cases (i.e. a high probability of a loan repayment is identified)	All credit providers	Recommendation
Denmark	DTI: in areas with significant price increases (Copenhagen and Århus) if the 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)	Banks and mortgage credit institutions	Binding regulation
	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	Binding regulation
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 DSTI must be met at the interest rate in the loan contract (base rate plus margin) plus 2 percentage points, or an annual rate of 6%, whichever is higher	All credit institutions operating in Estonia, including the branches of foreign credit institutions	Binding regulation
Finland	Borrower stress test to test ability to service the debt if the mortgage rate would be 6% and have a maturity of 25 years; also takes into account housing company loans	Banks	Recommendation
	Maximum loan maturity of 25 years	Banks	Recommendation
Hungary	DSTI: for loans with a maturity over 5 years there are different levels for loans with a floating interest rate or an interest rate fixed for less than 5 years (25%-30%), loans with an interest rate fixed for at least 5 years but less than 10 years (35%-40%) and loans with an interest rate fixed for at least 10 years (50%-60%). For loans in EUR (30%) or other foreign currency (10%) stricter rules are set, also differentiated by the interest rate fixation period. The lower of the two values is for people with an annual income below HUF 400,000, the other value is for those earning more[191]	All credit institutions and non-bank financial companies operating in Hungary	Binding regulation

[191] The income-based threshold of HUF 400,000 will be increased to HUF 500,000 for loans issued from 1 July 2019 onwards.

Ireland	LTI: new housing loans to second and subsequent buyers with an LTI>3.5 should be ≤20% of aggregate new mortgage lending to these borrowers. New housing loans to first-time buyers with an LTI>3.5 should be ≤10% of aggregate new mortgage lending to first-time buyers	All supervised institutions extending mortgage loans to consumers on a property with an exposure based in Ireland.	Binding regulation
	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 service providers authorised in Ireland or another EU or EEA Member State	Binding regulation
Liechtenstein	Amortisation: a mortgage must be amortised so that the LTV ratio falls below two-thirds within 20 years	Credit institutions that issue mortgages in Liechtenstein	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 credit providers as long as credit is provided to consumers (stressed DSTI limit and DSTI exception applies only when issuing housing credits	Binding regulation
Netherlands	DSTI: 10.5%-29.5% with a yearly recalibration, dependent on the income of the borrowers and the interest rate. For mortgages with a fixed interest rate of less than 10 years, the DSTI is calculated using a fixed rate (currently 5%)	All credit providers operating in the Netherlands, including branches	Binding regulation
	LTV: 100%	All credit providers operating in the Netherlands, including branches	Binding regulation
	Maturity: the interest payments of mortgage loans where less than the monthly amount under an annuity scheme is amortised or which are amortised after 30 years are not tax deductible	All credit providers operating in the Netherlands, including branches	Binding regulation
Norway	Amortisation: 2.5% rate for residential mortgage loans with LTV>60% or equivalent to an annuity loan with a 30-year repayment period. 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
	Stress test: an interest rate stress test/sensitivity test is conducted when assessing the borrower's repayment capacity making an allowance for an interest rate increase of 5 percentage points. 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 30 years	Banks	Recommendation
	DSTI: bank-internal limits for all loans to households; banks should pay particular attention to loans with DSTI>40% (for borrowers with incomes below the average salary in the region) and DSTI>50% (for other borrowers)	Banks	Recommendation
	Other: a mortgage loan can only be granted or indexed in the currency in which the borrower receives the majority of its income or holds the majority of its financial assets or other assets (valuation done using the credit currency)	Banks	Binding regulation
Portugal	Maturity: maximum of 40 years for new credit relating to residential immovable property or credit secured by a mortgage or equivalence guarantee; 10 years for new consumer credit agreements. Average maturity of new credit agreements should gradually converge to 30 years by the end of 2022	All credit institutions and financial companies that have head offices or branches in the Portuguese territory	Recommendation
	DSTI: limit of 50%; up to 20% of total credit granted by each institution in each year may be granted to borrowers with a DSTI of up to 60%; up to 5% of total credit granted by each institution in each year may exceed all such limits	All credit institutions and financial companies that have head offices or branches in the Portuguese territory	Recommendation
Romania	DSTI: limit of 40% for national currency loans and 20% for FX loans; considers the overall level of indebtedness for both mortgage and consumer loans. Limit can be 5 percentage points higher for first-time home buyer loans for borrower-occupied dwellings. Maximum of 15% of a creditor's new loans to households can be exempted from the DSTI limits	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 service providers in Slovakia	Binding regulation
	DSTI: limit of 80% for the borrower's disposable income; in the case of floating rate loans, an interest rate increase of two percentage points is assumed. Exception: for clients with debt-to-income (including the new loan) not exceeding 1 (or 1.5 in case of leasing), the above-mentioned limit is 100%	All regulated financial service providers in Slovakia	Binding regulation
	DTI: total debt (including both new and existing loans) may not exceed eight times yearly net disposable income; 20% of the loans granted in Q3 2018 and 15% of the loans granted in Q4 2018 are allowed to exceed this DTI limit of 8 From 1 July 2019, the share of new loans with a DTI>8 can exceed 5% (up to 10%) only for loans granted to clients aged 35 or younger and an income below 130% of the national average, DTI<9 then applies	All regulated financial service 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%. Additional annual repayments of at least 1% for loans with LTI>4.5 in excess of the previous amortisation requirement	All credit institutions operating in Sweden, including the branches of foreign credit institutions	Binding regulation
United Kingdom	LTI: mortgage lenders should not extend more than 15% of new residential mortgages with an LTI≥4.5; de minimis exception for lenders with mortgage lending up to GBP 100 million per annum or extending fewer than 300 mortgages	Mortgage lenders	Binding regulation
	Affordability test: mortgage lenders should assess whether the borrower can still afford the loan if, during the first 5 years of the loan, the mortgage rate were to be 3 percentage points higher than the reversion rate when the mortgage was written or, if no reversion rate, three percentage points higher than the product rate when the mortgage was written	Mortgage lenders	Recommendation

Source: ESRB.
Notes: Table refers to residential real estate instruments that were active in 2018 but might have been implemented earlier. Additionally, instruments that have been publicly disclosed and are set to come into force in 2019 are also included. Amortisation requirements have been included both under the income stretch and the collateral stretch categories.

Table A.2.3

Lender stretch instruments

Member State	Limit	Scope	Basis for measure
Belgium	Risk weights: 5 percentage point add-on to the risk weights on retail exposures secured by residential immovable property in Belgium and an additional risk-sensitive add-on of 33% of the risk weight of the bank's (residential) mortgage portfolio	Banks using the IRB approach	Binding regulation
Croatia	Risk weights: stricter definition of residential property for preferential risk weighting and risk weight of 35% may be assigned provided the owner of the residential property is the owner of not more than two residential properties	Banks using the standardised approach (SA)	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 IRB approach	Binding regulation
Ireland	Risk weights: stricter criteria for preferential weighting of residential mortgage loans: LTV<75% for preferential risk weighting and property must be owner-occupied	Banks using the SA	Binding regulation
Liechtenstein	Risk weights: 35% for residential properties with an LTV up to 66.6%; 50% for residential properties with an LTV between 66.6% and 80%	Credit institutions that issue mortgages in Liechtenstein	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: 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, otherwise 100%	Credit institutions licensed in Malta	Binding regulation
Poland	Risk weights: 150% for exposures secured by mortgages on RRE where the principal or interest instalments depend on changes in the exchange rate of one or more foreign currencies that differ from the borrower's income currency	Banks	Binding regulation for banks using SA, Pillar 2 requirement for IRB banks
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% for the average risk weight on mortgage exposures	All credit institutions using the IRB approach operating in Sweden, including the branches of foreign credit institutions	Binding regulation (Pillar 1)

Source: ESRB.

Notes: Table refers to residential real estate instruments that were active in 2018 but might have been implemented earlier. Additionally, instruments that have been publicly disclosed and are set to come into force in 2019 are also included.

Annex 3: Active commercial real estate instruments in Europe

Table A.3.1

All instruments

Member State	Limit	Scope	Basis for measure
Croatia	Risk weights: 100% for exposures secured by mortgages on commercial immovable property	Banks using the SA	Binding regulation
Cyprus	LTV: 70% for loans for property that is not the primary residence of the borrower	All credit institutions authorised and operating in Cyprus, including branches	Binding regulation
	DSTI: 80% for loans for all property that is not the primary residence of the borrower, 65% for FX loans	All credit institutions authorised and operating in Cyprus, including branches	Binding regulation
Denmark	DSTI: 100% with a denominator defined as EBITVA (i.e. excluding value gains) whereas the nominator also requires the loan to be amortised over a maximum of 30 years	Banks	Binding regulation
	Other: 25% limit on lending to construction companies and real estate companies as a share of total lending	Banks	Binding regulation
	Other: 15% lending growth cap	Mortgage credit companies	Binding regulation
Ireland	Risk weight: minimum of 100% for exposures secured by mortgages on commercial immovable property	Banks using the SA	Binding regulation
Latvia	Risk weights: 100% for exposures secured by mortgages on commercial immovable property	Banks using the SA	Binding regulation
Luxembourg	Limit on exposures to real estate development as a share of capital	All professionals performing lending operations, which includes banks and branches	Binding regulation
Norway	Risk weights: 100% for exposures secured by mortgages on commercial immovable property	Banks using the SA 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, or by government or NBP securities	Banks	Recommendation
	Risk weights: 100% for exposures secured by mortgages on commercial immovable property	Banks using the SA	Binding regulation
Romania	Risk weights: 100% for exposures secured by mortgages on commercial immovable property	Banks using the SA	Binding regulation

Sweden	Risk weights: 100% for exposures secured by mortgages on commercial immovable property	Banks using the standardised approach	Binding regulation
	Risk weights: increase in risk weights of corporate exposures (which includes CRE exposures) through higher Pillar 1 requirements for all IRB banks, which includes those using the advanced IRB approach (see "other" measure below), and stricter Pillar 2 requirements for banks using the advanced IRB approach (see "maturity" measure below)	Banks using the (advanced) IRB approach	Binding regulation
	Other: estimation of the probability of default should anticipate a larger proportion of economic downturns, i.e. every fifth year should be considered as a "downturn year", with higher default rates; expected to result in a risk weight for corporate exposures of at least 30%	Banks using the (advanced) IRB	Binding regulation
	Maturity: 2.5 year maturity floor under Pillar 2; expected to raise the capital requirements by up to 0.5 percentage points	Banks using the advanced IRB approach	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 SA	Binding regulation
	Risk weights: a slotting exercise to assign one of four different risk weights, ranging from 50% to 250%, to income-producing CRE loans on their books	Banks using the IRB approach	Binding regulation
	Risk weights: stricter criteria for loans secured by commercial property located in a jurisdiction that is not in the EU	Domestic banks, building societies, and designated investment firms using the standardised approach	Binding regulation

Source: ESRB.
Notes: Table refers to commercial real estate instruments that were active in 2018 but might have been implemented earlier. Additionally, instruments that have been publicly disclosed and are set to come into force in 2019 are also included.

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

Table A.4.1

Cross-border corporate structures of systemically important institutions

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 SA	RO
		Tatra banka, a.s.	SK
Belgium	KBC Group	United Bulgarian Bank AD	BG
		Československá obchodní banka	CZ
		K&H Bank	HU
		Československá obchodná banka	SK
Czech Republic	J&T Finance Group	J&T Banka, a.s.	CZ
		Poštová banka, a.s.	SK
Finland	Nordea Bank Abp	Nordea Kredit Realkkredit A/S	DK
		Nordea Hypotek AB	SE
		Luminor Bank AS *	EE
		Luminor Bank *	LT
		Luminor Bank AS *	LV
France	BNP Paribas	BNP Paribas Fortis SA	BE
		BGL BNP Paribas SA	LU
		Bank BGŻ BNP Paribas SA	PL
	Société Générale	Société Générale Expressbank †	BG
		Komerční banka, a.s.	CZ
		Société Générale Bank & Trust	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
		Deutsche Bank Polska S.A.	PL

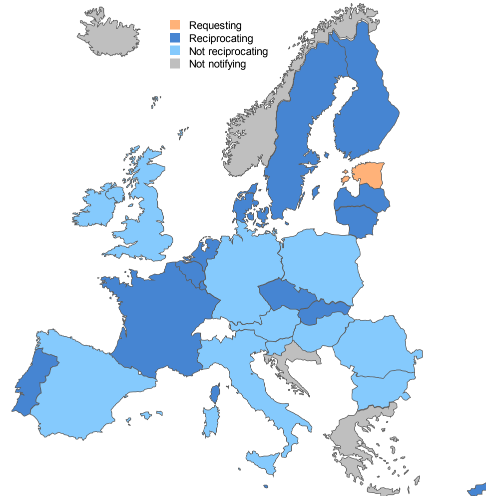
Greece	**Alpha Bank**	Alpha Bank Cyprus Ltd.	CY
		Alpha Bank Romania SA	RO
	Eurobank Ergasias	Eurobank Bulgaria AD	BG
		Eurobank Cyprus Ltd.	CY
	Piraeus Bank	Piraeus Bank Bulgaria AD	BG
Hungary	**OTP Bank**	DSK Bank EAD	BG
		OTP banka Hrvatska d.d.	HR
		OTP Bank SA	RO
		Splitska banka d.d.	HR
Italy	**Intesa Sanpaolo**	Privredna Banka Zagreb d.d.	HR
		CIB Bank Zrt.	HU
		Všeobecná úverová banka, a.s.	SK
	UniCredit	UniCredit Bank Austria AG	AT
		UniCredit Bulbank AD	BG
		UniCredit Bank Czech Republic and Slovakia,	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
Spain	**BBVA**	Garanti Bank SA	RO
	Banco Santander	Santander Bank Polska SA	PL
		Banco Santander Totta SA	PT
		Santander UK Plc	UK
	CaixaBank	Banco BPI, SA	PT
Sweden	**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: Standard and Poor's Global Market Intelligence (formerly SNL) and 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 (e.g. J&T Finance Group SE). The O-SII classification is based on the notifications the ESRB received pertaining to the 2018 identification exercise. Organisational changes prior to 31 December 2018 are incorporated into this list; for instance Nordea moving to Finland. The Luminor entities operating in the Baltic States, as denoted by the asterisk (*), are subsidiaries of the Luminor Group AB, based in Sweden, which has not been designated as an O-SII there. Luminor Group is a joint venture Nordea Bank Abp and DNB Bank ASA, with both entities having equal voting rights. Nordea Bank Abp owns 56% of the shares and DNB Bank ASA 44%, but the Luminor Group is not consolidated within the Nordea Group .The Société Générale Expressbank (BG) denoted with the dagger (†) was bought by OTP Bank (HU) from Société Générale (FR) with the merger being completed on 15 January 2019, thus falling outside the scope of this report and table.

Annex 5: Reciprocation maps

Chart A.5.1

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

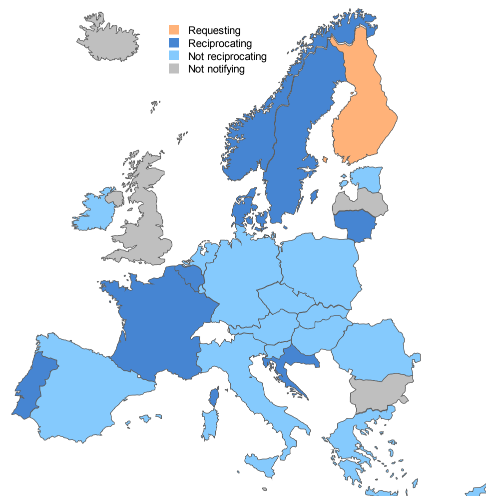


Source: ESRB.

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. Due to Estonia's recalibration of the SyRB, which now includes a de minimis threshold of 1% of total risk weighted credit risk exposures (i.e. €250 million), Croatia no longer fulfils all the criteria to be considered as reciprocating. 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.

Chart A.5.2

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

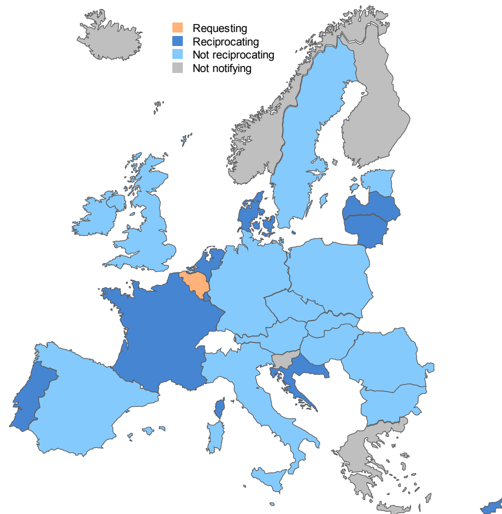


Source: ESRB.

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.

Chart A.5.3

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

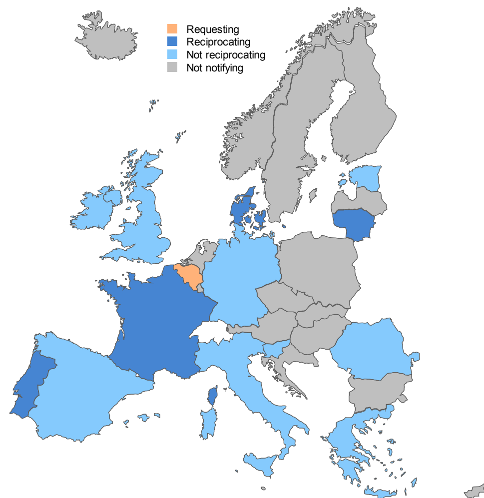


Source: ESRB.

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.

Chart A.5.4

Reciprocation of the new 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.

Chart A.5.5

Reciprocation of the Swedish 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 Sweden, which requested reciprocation of its national flexibility measure (a credit institution-specific average risk weight floor of 25% for IRB banks, at the portfolio level, of retail exposures to obligors residing in Sweden secured by immovable property). "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. This map is not final as the deadline for reciprocation has not passed yet. The most up-to-date version can always be found on the ESRB's website.

Chart A.5.6

Reciprocation of the French exposure limits to NFCs 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 France, which requested reciprocation of its national flexibility measure (tighter large exposure limit of 5% to highly-indebted French non-financial corporations applied to systemically important institutions at the consolidated level). "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. This map is not final as the deadline for reciprocation is 1 August 2019. The most up-to-date version can always be found on the ESRB's website.

Countries and abbreviations

Countries

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

Other

ASC	Advisory Scientific Committee
BIS	Bank of International Settlements
CCoB	capital conservation buffer
CCP	central counterparty
CCyB	countercyclical capital buffer
CEE	central and eastern Europe
CET1	Common Equity Tier 1
COREP	common reporting
CRD	Capital Requirements Directive
CRE	commercial real estate
CRR	Capital Requirements Regulation
CSD	central securities depository
DSTI	debt service-to-income
DTI	debt-to-income
EBA	European Banking Authority
ECB	European Central Bank
ECOFIN	Economic and Financial Affairs Council
EEA	European Economic Area
EIOPA	European Insurance and Occupational Pensions Authority
ESA	European Supervisory Authority
ESMA	European Securities and Markets Authority
ESRB	European Systemic Risk Board
EU	European Union
FFAR	foreign exchange funding adequacy ratio
GDP	gross domestic product
GLTDF	gross loan-to-deposit flows
G-SII	global systemically important institution
IRB	internal ratings-based
IWG	Instruments Working Group
LCR	liquidity coverage ratio
LGD	loss-given-default
LTC	loan-to-collateral
LTD	loan-to-deposit
LTI	loan-to-income
LTV	loan-to-value
MiFID	Markets in Financial Instruments Directive
MiFIR	Markets in Financial Instruments Regulation
MoU	memorandum of understanding
MREL	minimum requirement for own funds and eligible liabilities
NCA	national competent authority
NFC	non-financial corporation
NPL	non-performing loan
NSFR	net stable funding ratio
O-SII	other systemically important institution
RRE	residential real estate
RTS	Regulatory Technical Standards
RW	risk weight
SA	standardised approach
SCN	Supervisory Coordination Network
SREP	Supervisory Review and Evaluation Process
SSM	Single Supervisory Mechanism
SyRB	systemic risk buffer
UFR	ultimate forward rate

Imprint

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