RESEARCH AND POLICY NOTES 4

Tomáš Konečný, Lukáš Pfeifer

Macroprudential Ring-Fencing

2019

CNB CZECH NATIONAL BANK

RESEARCH AND POLICY NOTES

Macroprudential Ring-Fencing

Tomáš Konečný
Lukáš Pfeifer

4/2019

CNB RESEARCH AND POLICY NOTES

The Research and Policy Notes of the Czech National Bank (CNB) are intended to disseminate the results of the CNB's research projects as well as the other research activities of both the staff of the CNB and collaborating outside contributors, including invited speakers. The Notes aim to present topics related to strategic issues or specific aspects of monetary policy and financial stability in a less technical manner than the CNB Working Paper Series. The Notes are refereed internationally. The referee process is managed by the CNB Economic Research Division. The Notes are circulated to stimulate discussion. The views expressed are those of the authors and do not necessarily reflect the official views of the CNB.

Printed and distributed by the Czech National Bank. Available at http://www.cnb.cz.

Reviewed by: Magda Pečená (Charles University, Prague)
Helena Sůvová (Czech National Bank)

Project Coordinator: Dominika Ehrenbergerová, Martin Hodula

Macroprudential Ring-Fencing

Tomáš Konečný and Lukáš Pfeifer*

Abstract

This paper focuses on ring-fencing in the specific context of macroprudential policy and its effects on financial integration in the EU over time. It views macroprudential ring-fencing as a restriction on the regulatory capital mobility of cross-border banking groups as a result of macroprudential measures. We find two main factors behind the observed heterogeneity of macroprudential policy with the potential for ring-fencing – credit risk materialisation and the share of foreign-owned banks' assets related to the gradual phase-in of capital reserves. The heterogeneity of risk weights should be partly limited by the new CRD V/CRR II regulatory package and other prudential backstops (such as the leverage ratio requirement and the output floor). On the other hand, the new regulatory package contains limits on structural reserves, which may lead to a situation where regulatory design precludes the application of macroprudential measures corresponding to the level of systemic risk.

Abstrakt

Článek se zaměřuje na problematiku ring-fencingu v oblasti makroobezřetnostní politiky a jeho důsledky pro vývoj finanční integrace v EU. Makroobezřetnostní ring-fencing chápe jako omezení pohybu regulatorního kapitálu v rámci přeshraničních bankovních skupin v důsledku zavedení makroobezřetnostních opatření. Identifikujeme dva hlavní faktory, které stojí za pozorovanou heterogenitou nastavení makroobezřetnostní politiky s potenciálem k ring-fencingu – projevy úvěrového rizika a podíl aktiv bank v zahraničním vlastnictví související s postupným náběhem kapitálových rezerv. Heterogenitu rizikových vah by mělo částečně omezit přijetí regulatorního balíčku CRD V/CRR II a dalších obezřetnostních pojistek (např. požadavku na pákový poměr nebo výstupový práh). Na druhou stranu, nový regulatorní balíček obsahuje limity pro nastavení strukturálních rezerv, které mohou vést k situaci, kdy regulace zabraňuje nastavení makroobezřetnostních nástrojů v rozsahu, který by odpovídal úrovni systémového rizika.

JEL Codes: E58, E61, G18.

Keywords: Financial stability, macroprudential policy, ring-fencing.

* Tomáš Konečný, Czech National Bank, Financial Stability Department (Tomas.Konecny@cnb.cz).
Lukáš Pfeifer, Czech National Bank, Financial Stability Department; University of West Bohemia, Faculty of Economics, (Lukas.Pfeifer@cnb.cz).
The authors would like to thank Libor Holub, referees Magda Pečená and Helena Sůvová, research coordinators Dominika Ehrenbergerová and Martin Hodula, and the participants at the Czech National Bank seminar held on 19 December 2019 for insightful comments. All remaining errors and omissions are those of the authors.
The views expressed in this paper are those of the authors and not necessarily those of the Czech National Bank.

1. Introduction

The twin experience of the recent financial and sovereign crisis has shown in full light the fragility and loopholes in the European financial architecture. The post-crisis regulatory reforms designed to strengthen the resilience of the banking sector could not make up for the existing vulnerabilities in a number of European economies, in particular the "doom" loop between banks and sovereigns. In the face of the resulting crisis and near break-up of the Eurozone, policy makers endorsed the Banking Union[1] project, which entailed a move towards an integrated regulatory and supervisory area and the ultimate creation of a genuine single banking market in the EU. The envisioned Banking Union was meant to provide a solid basis for deeper financial integration and contribute to long-term economic prosperity and financial stability on the continent (Draghi, 2018).[2]

The EU nonetheless remains financially fragmented, as the cross-border credit flows of EU banks are currently approaching the levels observed in 2006 (Emter et al., 2018). This, together with the mounting pressure on bank profitability and business models in the current low interest rate environment, increases the potential relevance of targeted policy measures to address performance and financial stability in the European banking sector. In particular, recent policy discussions have increasingly focused on the heterogeneity of supervisory practices across the EU banking systems. A noteworthy example is the perceived ring-fencing of capital and liquidity along national borders, which constrains the mobility of resources within cross-border banking groups and tends to be perceived as a contributing factor to financial fragmentation along national borders, with negative repercussions for financial stability in the EU.

This study advocates a more comprehensive and balanced discussion of the costs and benefits of capital and liquidity flows within cross-border banks and of prudential ring-fencing measures. Such a discussion would provide policymakers, academics, institutions and market participants with a more holistic perspective and thus facilitate debate on the optimal approach to cross-border banking and internal capital and liquidity flows in the Banking Union over the longer term.

The focus of our study specifically on macroprudential policies with potential ring-fencing effects might be seen as rather narrow in view of the complexity of the topic. Nonetheless, macroprudential policies and reforms to advance financial integration in Europe share a common objective of financial stability and thus make it a convenient reference point.[3]

The knowledge and understanding of macroprudential policies in all their variety and detail has been growing over time, partly because of their active use across the EU since the activation of

[1] All euro area countries are inside the Banking Union, but a quick look at Wikipedia reveals that none of the EU member states outside the euro area had joined by 2015, and most still remain outside the Union.

[2] According to the ECB definition, a market is fully integrated if all potential market participants with the same relevant characteristics: (1) face a single set of rules; (2) have equal access to the market; and (3) are treated equally when they are active in the market (ECB, 2007).

[3] The shared objective nonetheless does not preclude different worldviews. While financial integration aims to promote financial stability through risk diversification and private risk-sharing enhanced by resource mobility within cross-border groups, the macroprudential perspective typically endorses the use of dedicated policy instruments, some of which might potentially affect capital and liquidity flows within cross-border banking groups.

CRD/CRR in 2013. Our approach is to anchor macroprudential policies into a wider discussion on the effects and implications of ring-fencing and then discuss the evolution of macroprudential policies with ring-fencing effects in the EU over time, reflecting on potential future developments in view of the recent adoption of the CRR II/CRD V legislation.

Section 2 discusses in detail the definition of ring-fencing and related concepts. Section 3 explores the link between financial stability and macroprudential policies with potential ring-fencing effects. Section 4 provides a basic taxonomy of measures with potential ring-fencing effects in the microprudential, macroprudential, and recovery and resolution domains, and outlines checks and balances in the macroprudential framework to address concerns related to excessive ring-fencing. The ensuing section considers the evolution of macroprudential ring-fencing across time and elaborates on two forces behind the perceived heterogeneity of macroprudential policies with ring-fencing potential in the past and present. These include (i) different phase-in periods for macroprudential capital buffers, related to different credit risk materialisation and the share of foreign-owned banks, and (ii) risk-weight declines with systemic implications in some EU member states. The follow-up discussion considers possible future developments and the implications of the EU's revised CRR II/CRD V legislation for reducing the potential for excessive (and insufficient) ring-fencing and heterogeneity of national macroprudential policies. Section 7 concludes.

2. Definition of Ring-Fencing

There are relatively few definitions of ring-fencing in the existing literature. Paraphrasing Schwarcz (2013), the term ring-fencing in the regulatory context can generally be understood as measures aimed at "legally deconstructing a firm in order to more optimally reallocate and reduce risk", either by separating risky assets from the firm, by preventing the firm itself from engaging in risky activities or investing in risky assets, or by protecting the firm from affiliate or bankruptcy risks. D'Hulster (2015) elaborates on the last mechanism by using the term "geographical ring-fencing" for unilateral actions by prudential authorities "with the objective of protecting a bank's domestic assets so that they can be seized and liquidated under local law in case of failure of the whole banking group or other entities of the group".

For the purposes of the present study, we adhere to the simple EBA (2014) approach, which does not resort to potential motivations for imposing ring-fencing measures. According to EBA (2014), ring-fencing "is achieved when a Member State restricts the flow of capital between subsidiaries (or sub-consolidated levels) of a group by requiring that the subsidiaries (or sub-consolidated levels) in its jurisdiction must hold a certain amount of capital, effectively locking in the capital within that subsidiary (or sub-consolidated level)". This definition emphasises the geographical separation of cross-border bank activities and the involvement of prudential authorities (similarly to Cerutti et al., 2010; D'Hulster and Otker-Robe, 2015; and Beck et al., 2015) through supervisory discretion. The inclusion of supervisory discretion in the definition of ring-fencing is in fact essential, as no ring-fencing measure can be sustained unless prudential authorities are provided with a sufficient degree of freedom over the implementation of their powers.[4]

[4] In particular, we do not consider as ring-fencing any supervisory interventions that restrict the mobility of capital and liquidity unless their implementation entails scope for supervisory judgement.

The study focuses predominantly on "justified" ring-fencing measures that follow from sound supervisory judgement. It is important to note that while such ring-fencing measures might technically restrict the capital and liquidity flows of cross-border banking groups, their proportionate application by prudential authorities falls within the mandate of those authorities and should therefore not be viewed as restrictions on the free movement of capital. This notion stands in sharp contrast to excessive ring-fencing, where supervisory measures have been applied disproportionately or without proper justification (European Commission, 2014). For the sake of completeness, we complement the discussion on justified and excessive ring-fencing by referring to the concept of insufficient ring-fencing, which relates to situations where regulatory design constrains the application of supervisory measures to the extent that the actual or potential mobility of the capital and liquidity flows of cross-border banking groups might impact negatively on the balance between systemic risk and resilience in the financial system.

While the concepts of justified, excessive and insufficient ring-fencing might be useful, we advocate above all a definition of ring-fencing that abstains from normative assessments and instead relies predominantly on a more factual/positive approach. Such an approach is crucial for discussing the costs and benefits of increased capital and liquidity flows within cross-border banking groups. This discussion should evaluate/relate the net benefits in terms of financial stability and consider the gains from enhanced risk diversification and/or private risk-sharing (the financial integration channel), the potential costs (including elevated risks of contagion) and the available policy choices (including policies with potential ring-fencing effects). A positive/narrow approach to ring-fencing should thus provide a way forward for quantifying the costs and benefits of increased capital and liquidity flows within cross-border banking groups.

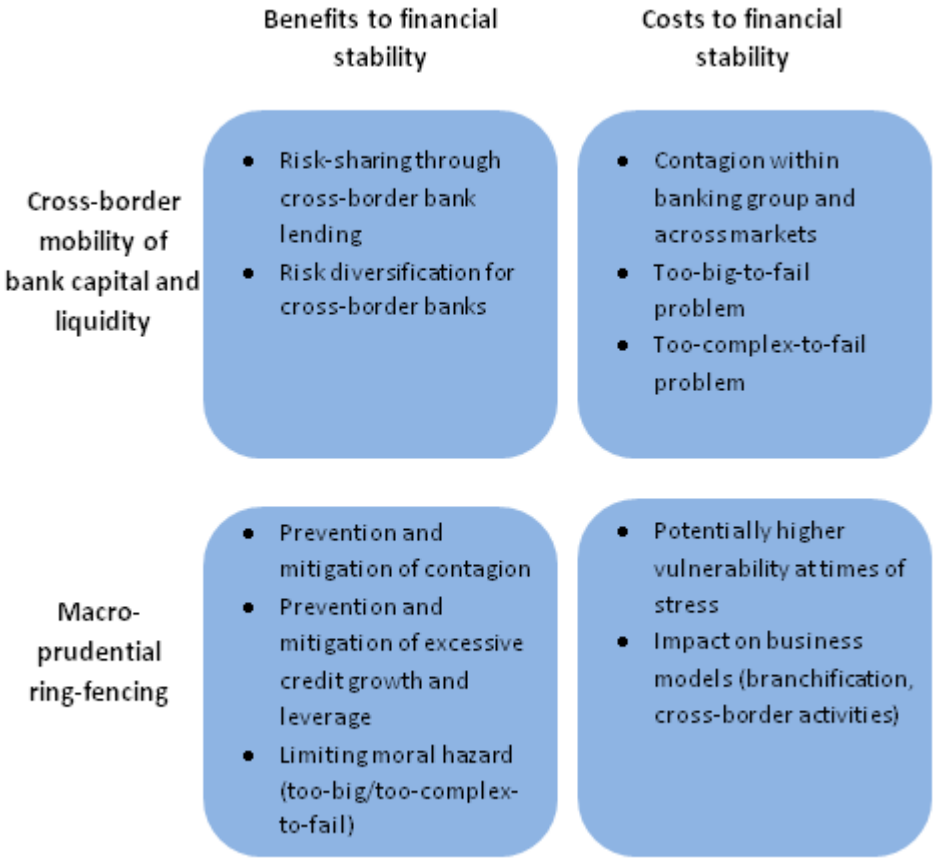
Our approach makes frequent reference to the recently published ESRB "risk-resilience framework" for the macroprudential policy stance (ESRB, 2019). The risk-resilience framework compares systemic risk with the level of resilience in the system, including the set of macroprudential policies implemented, and seeks a balance between systemic risk and resilience relative to financial stability objectives. The framework thus allows us to relate the concept of ring-fencing to the key building blocks of macroprudential policy discussions, namely systemic risk, resilience and the available macroprudential policy choices.

3. Ring-Fencing and Cross-Border Banks

The expected financial stability benefits of cross-border banking are closely linked to increased opportunities for risk diversification and risk sharing by banks.[5] Given that the mobility of capital and liquidity within cross-border banking groups supports the transmission mechanisms for risk diversification and risk sharing, it enhances the resilience of such groups and the stability of credit supply, and as such might also be desirable from the financial stability point of view (Figure 1).

[5] Furthermore, stronger cross-border banking might provide support for the monetary transmission mechanism and price stability in the Eurozone and thus act in synergy with the financial stability objective.

Figure 1: Benefits and Costs of Macroprudential Ring-Fencing and Resource Mobility of Cross-Border Banks



Source: Authors

Nonetheless, mobility of resources might aid the stability of cross-border banking groups in cases of asynchronous or asymmetric shocks, but less so when the shock is symmetric and severely affects all parts of the group. At the same time, the financial stability of host economies might depend crucially on the availability of banks' resources to support local credit in times of crisis. De-linking banks' capital from the local credit supply might be at odds with the systemic importance of many cross-border banks in EU host economies.[6] The ongoing debate on ring-fencing and financial integration has paid less attention to the implications of the de-coupling of capital and local credit for global financial stability. The absence of systemic importance from the theoretical framework on optimal currency areas might be partly to blame. Another possible reason is the temporary fact that a number of host economies with large shares of systemically important cross-border banks in their banking sectors are not members of the Banking Union. In any case, troubles in systemically important cross-border banks in a number of EU host

[6] In eight member states, foreign institutions designated as O-SIIs hold more than 50% of total banking sector assets. In some Central and Eastern European countries and Luxembourg, foreign institutions account for a significant proportion (or even the majority) of designated O-SIIs.

economies could cause disruptions to local credit supply and crisis contagion, potentially outweighing the global financial stability benefits of resource mobility within cross-border banks.[7]

As a result, even future policies addressing the financial stability of the EU monetary union might call for measures with ring-fencing potential along national lines at the cost of lower mobility of bank resources. Such financial stability measures fall typically, but not necessarily, in the domain of macroprudential policies with the primary objective to increase the resilience of financial institutions to various sources of systemic risk (Figure 1). At the same time, the implementation of measures involving ring-fencing might be costly by imposing constraints on cross-border banks' economies of scale and ability to access resources in times of stress. The constraints on the allocation of resources might then contribute to distortions in credit supply and cause greater vulnerability at the level of cross-border banks and implicitly the entire economy of the monetary union/EMU.[8] It is in this context that macroprudential policies addressing financial stability at the level of EU member states might sometimes be perceived as diverging from the ultimate objectives of a financially stable and fully operational Banking Union (European Commission, 2014; Beck et al., 2015; Bénassy-Quéré et al., 2018).

The justification for a given regulatory treatment should in principle be based on the presumption that the social benefits of such treatment exceed the related social costs, including the efficiency costs on market participants. In the case of macroprudential ring-fencing and restrictions on the mobility of the capital and liquidity of cross-border banks, a comprehensive analysis might prove to be a rather challenging task, as the Banking Union and EU member states are not independent systems and the macroprudential policies pursued by national authorities might actually contribute to overall financial stability, given that the reduced risk of financial instability in the country implementing a measure will generally tend to reduce the risk of possible contagion to other economies (ESRB, 2014).[9] Nonetheless, such an analysis could provide a basis for a consensus on the desired character of cross-border banking and internal capital and liquidity flows in the steady-state Banking Union and on the optimal policy choices going forward.

4. Prudential Measures with Ring-Fencing Potential

Supervisory measures with ring-fencing potential, i.e. measures that might lead to the restriction of capital and liquidity flows of cross-border banking groups, can in principle be classified into micro- and macroprudential instruments, and to a lesser extent also gone concern (recovery and resolution) policy tools. The debate on ring-fencing and prudential supervision is primarily framed within the microprudential context, given that a wide range of policy instruments with ring-fencing potential are of a microprudential nature (Table 1).[10] Microprudential restrictions are

[7] An evaluation of the microprudential supervisory stringency and macroprudential stances of home authorities could be instructive with respect to this kind of risk for host authorities.

[8] The costs of ring-fencing measures might translate further to an impact on the business models of cross-border banks, including a regulation-induced shift towards business structures relying predominantly on foreign branches (branchification), increased competitiveness pressures due to level playing field concerns, and effects on cross-border credit provision (see Figure 1).

[9] In fact, Draghi (2018) provides a consistent perspective, in that financial integration (including credit markets) needs to rely on a (more) stable financial system, not vice versa.

[10] Apart from micro- and macroprudential measures, Table 1 also lists ring-fencing measures originating in the resolution domain. These measures do not fall within the scope of this article.

justified on the grounds of preserving the soundness of individual institutions, even though some actions might be driven by financial stability concerns (Osinski et al., 2013). These concerns nonetheless remain anchored within the paradigm of individual banks. In EU countries, microprudential ring-fencing restrictions tend to concentrate mainly, but not exclusively, on the areas of capital adequacy, dividend restrictions and liquidity requirements (D'Hulster, 2015; European Commission, 2014).[11] Macroprudential supervision addresses financial stability concerns at the level of the financial system as a whole. The discourse on ring-fencing in the macroprudential domain focuses predominantly on macroprudential capital instruments (capital buffers).

Supervisory measures with ring-fencing potential may be anchored in the EU legislation, as well as being part of jurisdiction-specific approaches to regulation and supervision that impact on the amount of capital and liquidity that cross-border banking groups need to hold locally. In particular, while the CRR/CRD IV legislation provides a harmonised legal framework for macroprudential capital buffers, national authorities are still given certain leeway in their implementation,[12] including as regards the timeline for the activation and calibration of individual buffers. As a result, the practical implementation of macroprudential instruments in an asynchronous manner by the authorities might give rise to perceptions of ring-fencing.

Table 1: General Overview of Measures with Ring-Fencing Potential under CRR/CRD IV, BRRD and National Legislations

Microprudential		**Macroprudential**	**Resolution**
Capital adequacy	Liquidity requirements	Macroprudential capital buffers	Resolution plans
- minimum total (expected) regulatory capital ratio and Tier 1 - Pillar 2 requirements - bank branches required to hold minimum endowment capital*	- liquidity management on self-sufficient basis - supervisory measures in place for specific foreign banks (additional liquidity buffers, increased monitoring etc.)	- structural buffers (G-SII/O-SII, systemic risk buffer) - countercyclical capital buffer - capital conservation buffer - macroprudential use of Pillar II (not under revised CRR II/CRD V)	- determination of critical functions - approval of resolution strategy etc.
Dividend restrictions and asset transfers	Limits on intragroup exposures and funding	Other macroprudential measures	MREL
- restrictions on dividend distributions - restrictions on asset transfers - asset maintenance	- limits on intragroup exposures (national legislations) - restrictions on loan to deposit ratio	- national flexibility measures (Article 458 CRR) - higher real estate risk weights for STA	- eligibility criteria of internal MREL - bank-specific adjustments (balance sheet depletion,

[11] The European legislation allows the use of microprudential ring-fencing measures through a number of options and national discretions (ONDs). The existence of ONDs tends to be widely perceived as a major obstacle to further financial integration in Europe. In fact, the ongoing debate on the revision of the Capital Requirements Regulation and more broadly on the completion of the Banking Union has repeatedly highlighted the need for a consistent EU-wide approach to ONDs (e.g. ECB, 2017).

[12] CRR/CRD IV delegates the application of macroprudential instruments to the competent or designated authorities of the member states.

requirements	- maximum parent funding limit - limits on diversity of funding - maximum intragroup funding limit etc.	exposures (Article 124 CRR) - higher minimum average LGDs for IRB exposures (Article 164 CRR) - borrower-based measures (national legislations)	recovery options, restructuring plan etc.)
Local governance	Legal form		
- requirements for local expertise in risk management - minimum number of local board members - local senior management etc.	- conversion of branches to subsidiaries		

Note: * This measure can be applied to branches from third countries only. According to Article 17 CRD IV, branches of credit institutions authorised in other member states cannot be required to hold minimum endowment capital.

Source: D'Hulster (2015) and authors

The macroprudential policy framework in the EU has nonetheless been designed to address concerns about potentially excessive ring-fencing and about the level playing field in the single market by placing an emphasis on the proportionality and proper justification of measures adopted. The framework establishes the scope, design and applicability of relevant policy measures, as well as notification and authorisation procedures above certain pre-defined thresholds[13] that ensure that the policy process is transparent and well understood in each case (see Table 2). Communication with peer authorities through a system of notifications to the European institutions requires sharing of information on all relevant aspects of the policy process, including the calibration of the given policy tool. Transparency and expectations for stakeholders are further enhanced through communication of decisions on individual buffer rates and public disclosure of background information, which in many cases stands at a par with communication of monetary policy decisions.

Table 2: Macroprudential Instruments and Authorities' Discretion Bands

Type of instrument	**Legislation**	**Discretion bands**	
Macroprudential capital buffers		CRR/CRD IV	CRR II/CRD V
G-SII buffer	131 CRD IV	1–3.5%	1–3.5%
O-SII buffer	131 CRD IV	0–2%, for O-SII subsidiaries max (parent O-SII, 1% of total risk exposure)	0–3%, for O-SII subsidiaries min (parent O-SII + 1%, 3% or higher authorised buffer rate)
Systemic risk buffer	133–134 CRD IV	1–3% full discretion, higher than 3% with authorisation of	1–3%**; overall cap of 5% for cumulative SyRB and O-SII/G-SII

[13] The European Systemic Risk Board plays a central role within the framework, with the European Commission, the EBA and the ECB being other key stakeholders in the process of notification and authorisation.

		Commission	buffer rates; higher than 5% with authorisation of Commission
CCyB	130, 135–140, 160 CRD IV	0–2.5%, only exceptionally over 2.5%*	0–2.5%, only exceptionally over 2.5%*
Capital conservation buffer	129, 160 CRD IV	2.5%*	2.5%*
Macroprudential use of Pillar II	103 CRD IV	discretion defined by SREP rules	elimination of macroprudential use
Other ring-fencing measures			
National flexibility measures	458 CRR	non-objection process	non-objection process
Higher real estate risk weights for STA banks	124 CRR	up to 150%	up to 150%
Higher LGD for IRB banks	164 CRR	no upper limit	no upper limit

Note: * Exemptions of small and medium-sized investment firms possible. The application of all instruments is subject to a notification procedure with relevant EU authorities. ** SyRB also applicable to (subsets of) sectoral exposures.

5. Macroprudential Ring-Fencing as a Dynamic Concept

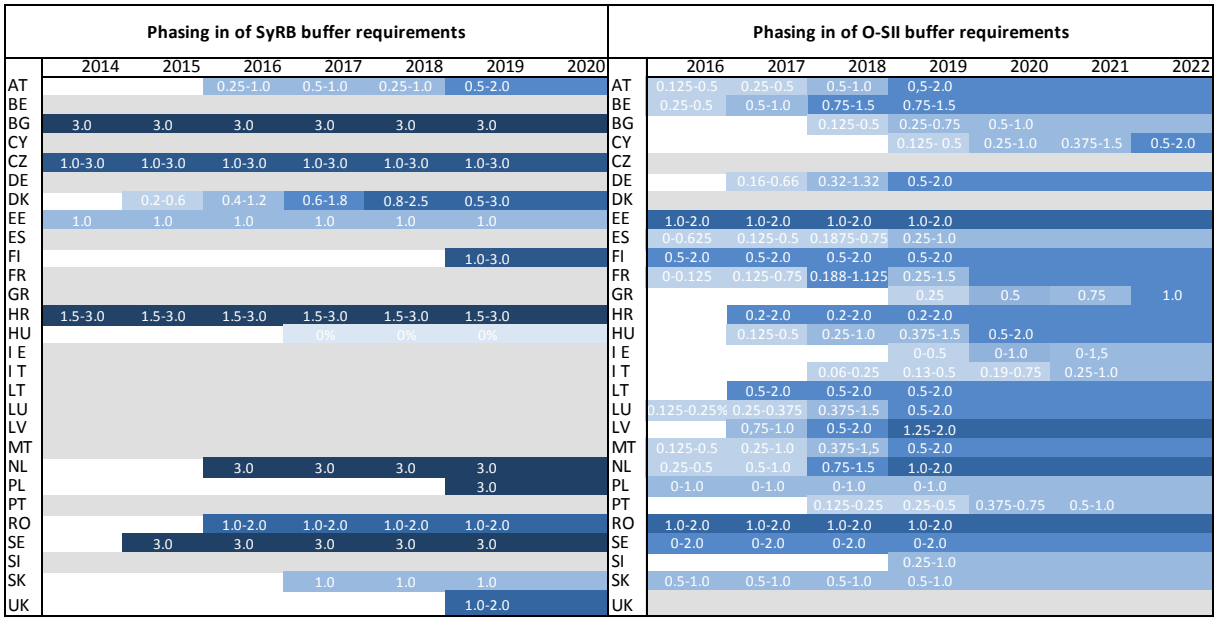
The application of macroprudential measures with ring-fencing potential across the EU member states should in general respond to the level and evolution of the underlying systemic risk and resilience in the particular financial sector. This concept has been conveniently captured in the ESRB's risk-resilience framework, which compares systemic risk with the level of resilience in the system given the set of macroprudential policies implemented. In particular, the approach seeks to assess the balance between identified systemic risk and resilience relative to financial stability objectives (ESRB, 2019) and produce an overall assessment of the macroprudential policy stance. Based on the assessment of the macroprudential policy stance, macroprudential authorities might subsequently adjust enacted policies to achieve a desired policy mix. The different combinations of systemic risk and resilience reflecting distinct structural features and phases of the financial and economic cycle might thus provide a reasonable and long-term explanation of the heterogeneity of macroprudential policies (including their phase-in) observed across the EU member states.

5.1 Gradual Phase-In of Macroprudential Instruments – Time and Levels Matter

CRR/CRD IV provided national authorities with the option of implementing selected instruments with ring-fencing effects in gradual fashion from 2014, with transition periods ending up to 2018. Article 160 CRD listed explicit transition periods from 1 January 2016 until 31 December 2018 for the countercyclical buffer and capital conservation buffer. However, a number of EU members have opted for a gradual phase-in for macroprudential capital buffers for which the EU legislation does not provide for explicit transition periods. The option of gradual transition has been used for

macroprudential buffers addressing structural risks (G-SII, O-SII and SyRB; see Figure 2)[14] whose full application could have entailed pressure on the financial sector in cases where the economic and financial crisis had led to capital depletion and stockpiling of legacy assets in distressed banks. The phased-in implementation of macroprudential capital buffers in such a situation thus reflected specific circumstances in the jurisdictions concerned in order to ensure a gradual transition towards a more resilient financial system and to avoid potential negative feedback loops to the real economy.

Figure 2: Phasing-In of Systemic Risk Buffer and O-SII Buffer Requirements in EU



Source: ESRB

The banking sectors of the EU member states that implemented macroprudential structural buffers with modest or no phase-in periods were in a more comfortable position. As a number of these countries had a larger market share of foreign banks, the case for early adoption of macroprudential structural buffers might have been further strengthened. Herring (2007) observes that the strongest incentives for ring-fencing arise when subsidiaries of cross-border banks are systemically important in the host jurisdictions and at the same time do not play a significant role in the parent group. As a result, national authorities from host authorities with a significant share of systemically important foreign subsidiaries should be among the first to introduce macroprudential structural buffers.

Figure 3 relates the phase-in and level of macroprudential structural buffers, the foreign market shares in the banking sectors of the EU member states, and banking sector vulnerabilities.[15] The figure tends to support the argument of Herring (2007) in that the frontrunners that introduced macroprudential structural buffers in the first year of their existence consisted largely of countries with the highest shares of foreign-owned O-SII subsidiaries. At the same time, Figure 3 highlights

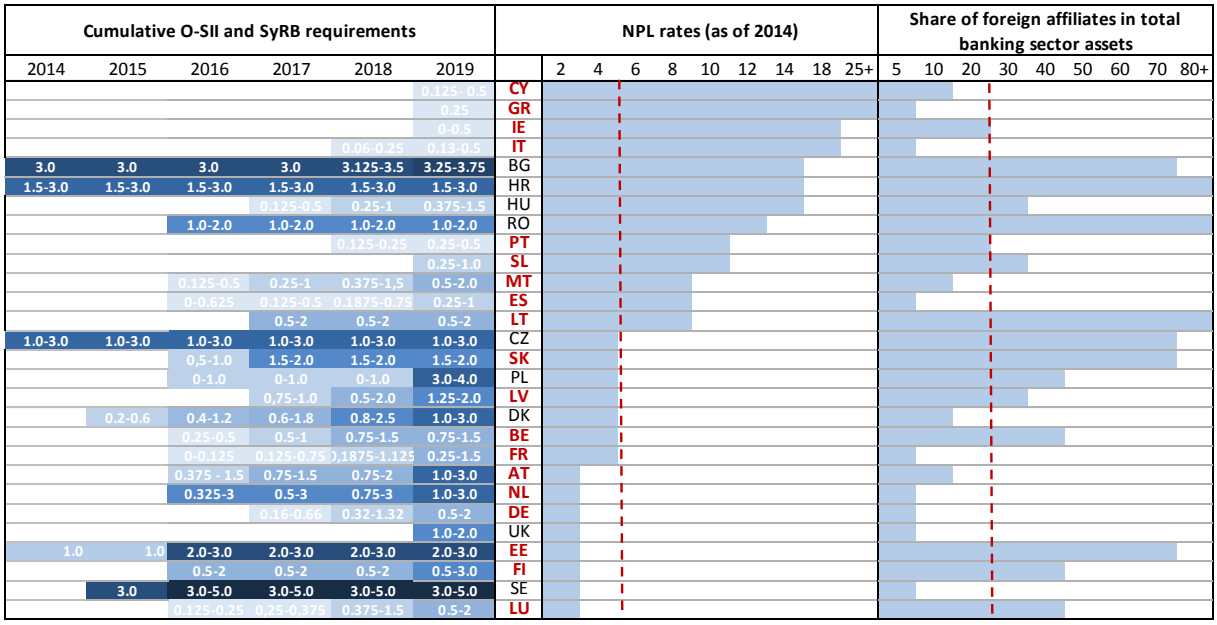
[14] Structural risk refers primarily to risk from misaligned incentives of participants that are linked to their size, complexity, interconnectedness, or cross-border activity. The cyclical dimension of systemic risk, on the other hand, relates closely to fluctuations in the financial cycle, such as the build-up of asset bubbles.

[15] Banking sector vulnerability is proxied by the NPL ratios at the time of introduction of the new macroprudential policies in 2014.

that EU countries with more vulnerable banking systems (home or host) were inclined to introduce macroprudential structural buffers with some delay.

Relatively healthy banking sectors might have provided an additional rationale for the early implementation of macroprudential structural buffers in a number of EU countries. Similarly, we can justify the level of capital reserves in member states. More vulnerable banking sectors have low capital buffers, with the exception of countries with high foreign market shares in the banking sector (Bulgaria, Croatia, Romania).

Figure 3: Introduction of Macroprudential Buffer, NPLs and Shares of Foreign Market Affiliates



Note: Banking Union members marked in red. The vertical dashed red lines mark the median of the NPL ratio and foreign market shares in banking sectors.

Source: ESRB, authors' calculations

5.2 Decline in Risk Weights under the IRB Approach

Another possible recent motivation for macroprudential measures with ring-fencing potential is the systemic dimension of the declines in risk weights seen in some EU member states. This concerns the risk weights under IRB models,[16] which have been scrutinised recently, as the heterogeneity in IRB risk weights and differences in STA and IRB risk weights across EU member states have given rise to concerns about the implications of such developments for the prudentiality of the existing regulatory framework in the EU.[17]

[16] Banks can use two approaches to measure credit risk in the current Basel II framework – the standardised (STA) approach and the internal ratings-based (IRB) approach (BCBS, 2013). Under the STA approach, risk weights are determined according to regulatory rules, but under the IRB approach risk weights are linked closely to banks' own internal models. The risk weights in IRB banks should correspond to the riskiness of their business models and should be more sensitive to the true underlying risks.

[17] In fact, the median IRB aggregate risk weight for banks in the EU is 34% as of June 2015, significantly below the STA median risk weight of 75%, and the aggregate IRB risk weights range from 22% in Sweden to close to 50% in Austria (Turk-Ariss, 2017). While these patterns may be partly explained by portfolio- and destination-

The cyclical decline in the risk weights of IRB banks is linked to the favourable long-term economic developments. These are leading to a lower capital requirement and lower resilience of the banking sector, which may not be sufficient to absorb the impact of potential negative scenarios from a systemic perspective (systemic risk materialisation). Such autonomous changes in the macroprudential policy stance may induce a policy response by macroprudential authorities in order to ensure that banks hold sufficient capital to cover systemic risk. In recent years, the decline in IRB risk weights has been associated mainly with real estate exposures. Therefore, some national authorities have introduced measures to set constraints on the risk weights for real estate exposures so as to increase the resilience of banks, using Article 458 CRR. In particular, Finland and Sweden have applied Article 458 CRR to set minimum risk weights of 15% and 25% respectively, and Belgium has opted for a 5 percentage point add-on to the mortgage portfolios of domestic IRB banks (see Table A1 in the Appendix).

The measures to compensate features of the existing regulations are not limited to minimum risk-weight-type measures under Article 458 CRR. Under the current EU legislation, other options – such as capital buffers and Pillar II instruments – are also available, taking the role of compensating tools in the context of autonomous shifts in the macroprudential policy stance. Nonetheless, increased application of macroprudential tools in the domain of IRB risk weights, which might be considered primarily an instrument of microprudential regulation, could give rise to concerns about the nature of relationship between micro- and macroprudential policies in this area and call for further clarification by the legislator. In fact, future regulatory developments might render macroprudential interventions redundant. The output floor foreseen in Basel IV will set a lower limit for the aggregate risk-weighted exposures of IRB banks at 72.5% of aggregate risk-weighted exposures calculated using the STA approach. The resulting bottom constraint on risk weights will contribute to a more level playing field between STA and IRB banks and obviate the need for macroprudential policy action. The output floor will be implemented between 1 January 2022 and 1 January 2027; the complementary phase-in period will help mitigate the impact for banks for which the output floor will result in an increase in capital requirements.

In a similar way, the requirement of EBA (2017) for adequate representation of data from a period of economic contraction in the data sets used for calibrating IRB parameters should reduce the heterogeneity of the risk weights of IRB banks. The EBA guidelines must apply at the latest from 31 December 2021, but earlier implementation is encouraged. Furthermore, the Basel Committee on Banking Supervision (BCBS) has suggested a leverage ratio requirement (for details, see Pfeifer et al., 2017) as another backstop for low risk weights and therefore low resilience in the banking sector. The reform package (finalising the Basel III reforms) submitted by the European Commission in November 2016 implements a binding leverage requirement in the CRR. The leverage ratio does not reflect the riskiness of assets and is a function of Tier 1 capital and total exposures, comprising total assets plus selected off-balance sheet items. EBA (2016) recommends a microprudential leverage ratio requirement of 3%.

specific risk indicators, unequal phases of the financial cycle in member states, or different shares of STA and IRB banks across EU banking sectors (see, for example, Brož et al., 2017; Döme and Kerbl, 2017), a sizeable portion of the variability remains unexplained, challenging the overall comparability and consistency of the framework.

6. Ring-Fencing under CRR II/CRD V

The future dynamics of macroprudential policies with ring-fencing effects will depend to a significant degree on the ramifications of the new CRR II/CRD V legislation. The review of the existing EU regulations was a part of a broader reform package on risk reduction that entailed a major revision of EU banks' prudential and recovery and resolution rules on a roadmap to complete the Banking Union.[18] The primary objective of the review in the macroprudential domain was to introduce targeted adaptations of the existing macroprudential framework in the EU to enhance its effectiveness and efficiency (BCBS, 2017). This ambition entailed a revision of the macroprudential toolkit with a view to streamlining the entire framework, making it more operational and flexible while protecting the virtues of the Single Market.

The review was conducted with a broader need for the alignment of supervisory practices among micro- and macroprudential supervisory functions. A major step in this regard is the elimination of macroprudential use of Pillar 2 and the preservation exclusively of its microprudential function, which aims to replace the former blending of macro- and microprudential elements within the Pillar II framework.[19] By reducing overlaps across micro- and macroprudential supervision and enhancing transparency, the attribution of measures with potential ring-fencing effects to different sources of risk should thus become more straightforward.

The streamlining efforts were concentrated to a large degree on the revision of the current framework for macroprudential structural buffers. The review did not aim to raise the overall capital requirements for structural risks. Rather, it was aimed at exploiting synergies from greater harmonisation, consistency and comparability across the framework's various applications across the EU.

These efforts translated into, among other things, a clear delineation of the systemic risk buffer (SyRB) and the O-SII buffer, which should address the existing overlaps in the use of the two instruments.[20] In particular, the new EU legislation will not allow use of the SyRB to address risks related to the systemic importance of domestic banks, and instead mandates exclusive application of the O-SII buffer for that specific purpose. This delineation, in combination with the continued presence of O-SII caps for subsidiaries of EU parent institutions,[21] might nonetheless lead to situations of "insufficient" ring-fencing of the capital and liquidity flows of cross-border banking groups. Such situations might arise if some member states are unable to set an O-SII buffer corresponding the combination of systemic risk and resilience associated with the systemic importance of some domestic banks due to the binding O-SII cap for subsidiaries of cross-border banking groups. The term insufficient thus refers to circumstances that might lead to a suboptimal social outcome, as the macroprudential policy stance in this case tends to be excessively loose.

[18] See https://www.consilium.europa.eu/en/press/press-releases/2016/06/17/conclusions-on-banking-union/.

[19] Different practices have been observed regarding its macroprudential use.

[20] Several EU member states consider the current EU legislation on O-SII buffers (in particular the level of O-SII caps) as insufficient to fully cover risks associated with the systemic importance of domestic banks. As a result, some countries use the SyRB buffer instead of the O-SII buffer to reduce the risks associated with the systemic importance of banks, and other countries combine the O-SII buffer with an additional SyRB requirement.

[21] The caps for O-SII buffers have been raised from 2% to 3%, with the possibility to exceed the cap subject to an EU approval process, and at the subsidiary level from the higher of (1%, buffer rate at parent level) to the lower of (buffer rate at parent level + 1%, 3%, higher authorised buffer rate).

The revised CRR II/CRD V legislation balances more harmonised and streamlined design of the macroprudential framework with enhanced flexibility of macroprudential structural buffers in terms of their scope, design and application. The scope of the SyRB has been amended and generally extended, as the systemic risk buffer may be applied to risks of a structural and cyclical nature that cannot be covered by a countercyclical capital buffer, G-SII and O-SII buffers, or provisions under the CRR legislation. The enhanced design should further allow the systemic risk buffer to be applied to specific sectors or subsets of exposures.[22] The wider space for national authorities to address specific sources of systemic risk is nonetheless still subject to constraints by the legislator such as caps and authorisation procedures.[23,24]

The revised CRR II/CRD V introduces some elements that gear the legislative framework towards more structured application of macroprudential measures with ring-fencing effects. A more transparent, comparable and consistent legal framework might be particularly effective at ensuring that any macroprudential measures with potential ring-fencing effects are fully justified and excessive and/or that insufficient ring-fencing is avoided. Progress towards a more harmonised approach to the calibration of O-SII buffers is also to be welcomed.[25]

Nonetheless, the changes in the new legislation have not been unidirectional, as CRR II/CRD V provides for certain new discretions that might potentially increase heterogeneity in observed macroprudential policies with potential ring-fencing effects across the EU. For example, the introduction of an additional G-SII identification methodology that excludes activities across Banking Union member states from the calculation of the score for cross-border activity might provide incentives for macroprudential authorities to deviate from the harmonised framework. Apart from concerns related to an uneven playing field, the interaction of the resulting G-SII rates with the O-SII caps for subsidiaries of EU parent institutions might induce cases of insufficient ring-fencing where macroprudential authorities might not have adequate tools to address risks related to the systemic importance of the banks concerned.

Overall, the realignment of the CRR II/CRD V framework is not likely to cause substantial changes in the intensity of macroprudential policies with ring-fencing effects. Policymakers' preferences have been revealed over past policy cycles and are likely to remain stable. Given that the end dates of the phase-in periods for macroprudential structural buffers correlate closely with the application of the new macroprudential rules (estimated Q4/2020), it thus seems likely that the levels of the overall macroprudential buffers will remain relatively stable, except for variations in countercyclical capital buffer rates over the financial cycles

[22] These include explicitly residential real estate exposures, commercial real estate exposures, non-financial corporations excluding real estate and exposures to households excluding real estate.

[23] Different SyRB rates can apply to different sets of exposures, but Commission authorisation is required in the event of a breach of the 5% threshold for the cumulative SyRB rate applicable to a subset of exposures or the 5% threshold for the cumulative SyRB and O-SII/G-SII buffer rates. EU coordination requirements for the SyRB step in for a combined SyRB rate between 3% and 5% on any set of exposures. In that case, a Commission opinion is warranted. A combined SyRB rate exceeding 5% on any set of exposures requires a Commission authorisation.

[24] The narrowed scope of the SyRB turns restrictive for countries that consider the O-SII subsidiary caps too binding relative to the level of systemic risk driven by moral hazard and "too-big-to-fail" concerns in their financial sectors. In 2018, the Czech Republic and Denmark employed the SyRB as a substitute for the O-SII buffer in view of the limitations of the current EU regulatory framework.

[25] In particular, the EBA is expected to develop an appropriate methodology for the design and calibration of O-SII buffer rates and report to the Commission by 31 December 2020.

7. Conclusion

The term "ring-fencing" is used in a relatively liberal fashion. References to ring-fencing tend to have various implicit content, such as excessively protective measures of authorities limiting the mobility of the resources of cross-border banking groups regardless of their justification, or even measures imposed on top of the requirements at the consolidated group level.[26] Given the obvious need for more consistent use of the term, the present article aims to shed more light on the understanding of ring-fencing in the specific context of macroprudential policy. A functioning monetary union does not imply a need for the removal of microprudential or macroprudential measures with ring-fencing potential once these measures reflect underlying (systemic or other) risks. As such, some heterogeneity of prudential policies across the EU might be desirable from a social welfare point of view. In fact, using the example of macroprudential policies we argue that the active and timely use of such policies might be a source of justified ring-fencing even in the completed Banking Union.

There are several driving factors behind the observed heterogeneity in macroprudential policies with ring-fencing potential (primarily macroprudential buffers). We discuss the role of the state of the banking sector in the aftermath of the financial and sovereign crisis and the incentives of host authorities with a relatively large market share of banks with cross-border ownership. In particular, the crisis downturns left banking sectors in many EU countries with piles of legacy assets that caused a number of authorities to consider a more phased-in approach to the introduction of macroprudential structural buffers. The above tendency interacted with the incentives for early phase-in by host authorities with a significant domestic market share of systemically important banks owned by foreign banking groups. Macroprudential measures with ring-fencing potential have in some cases been implemented to overcome some features of the current regulatory framework by augmenting the capital requirements to cater for the evolution of the systemic risk of some loan portfolios (primarily through temporarily increased risk weights via Article 458 CRR). Nonetheless, the forthcoming amendments to the regulatory framework in the EU are likely to lead to their diminished use in favour of alternative micro- and/or macroprudential instruments (output floors, the EBA guidelines forming part of the IRB review, and sectoral systemic risk buffers). On the other hand, functioning monetary union does not imply a need for the removal of microprudential or macroprudential measures with ring-fencing potential once these measures reflect underlying (systemic or other) risks. As such, certain heterogeneity of prudential policies across the EU might be desirable from a social welfare point of view.

[26] See EBA (2014), European Commission (2014) and Bénassy-Quéré et al. (2018).

References

BCBS (2013): Regulatory Consistency Assessment Programme (RCAP): Analysis of Risk-Weighted Assets for Credit Risk in the Banking Book. Basel Committee on Banking Supervision.

BCBS (2017): Basel III: Finalising Post-Crisis Reforms. Basel Committee on Banking Supervision

BECK, R., D. REINHARDT, C. REBILLARD, J. RAMOS-TALLADA, J. PEETERS, F. PATERNÓ, J. WORZ, J. BEIRNE, AND L. WEISSENSEEL (2015): "The Side Effects of National Financial Sector Policies: Framing the Debate on Financial Protectionism." Occasional Paper No. 166, European Central Bank.

BÉNASSY-QUÉRÉ V., M. K. BRUNNERMEIER, H. ENDERLEIN, E. FARHI, M. FRATZSCHER, C. FUEST, P. O. GOURINCHAS, P. MARTIN, J. PISANI-FERRY, H. REY, I. SCHNABEL, N. VÉRON, B. WEDER DI MAURO, AND J. ZETTELMEYER (2018): "Reconciling Risk Sharing with Market Discipline: A Constructive Approach to Euro Area Reform." CEPR Policy Insight No. 91, Centre for Economic Policy Research.

BROŽ, V., L. PFEIFER, AND D. KOLCUNOVÁ (2017): "Are the Risk Weights of Banks in the Czech Republic Procyclical? Evidence from Wavelet Analysis." CNB Working Paper 15/2017, Czech National Bank.

CERUTTI E., A. ILYANA, Y. MAKAROVA, AND C. SCHMIEDER (2010): „Banking without Borders? Implications of Ring-Fencing for European Cross Border Banks." IMF Working Paper WP/10/247, International Monetary Fund.

D'HULSTER, K. (2015): "How Important is Territorial Bias in Prudential Supervision and Regulation?" *Journal of Financial Regulation and Compliance* 23(4), pp. 322–337.

D'HULSTER, K. AND A. ÖTKER-ROBE (2015): "Ring-Fencing Cross-Border Banks: An Effective Supervisory Response?" *Journal of Banking Regulation* 16(3), pp. 1750–2071.

DÖME, S. AND S. KERBL (2017): "Comparability of Basel Risk Weights in the EU Banking Sector." In Financial Stability Report, December 2017, Oesterreichische Nationalbank.

DRAGHI, M. (2018): "Risk-Reducing and Risk-Sharing in Our Monetary Union." Speech by Mario Draghi, President of the ECB, at the European University Institute, Florence, 11 May 2018.

EBA (2014): EBA Opinion on the Macroprudential Rules in CRR/CRD: EBA Response to the European Commission on Article 513 CRR Call for Advice. EBA/Op/2014/06, 30 June 2014.

EBA (2016): Cyclicality of Capital Requirements. European Banking Authority.

EBA (2017): Guidelines on PD Estimation, LGD Estimation and Treatment of Defaulted Assets. November 2017. European Banking Authority.

ECB (2007): Financial Integration in Europe. March 2007. Available at https://www.ecb.europa.eu/pub/pdf/fie/financialintegrationineurope200703en.pdf?1470741bc6dcc84cb69ab158c75f5a7e.

ECB (2017): Eurosystem Activities for Financial Integration. In Financial Integration in Europe. May 2017. Available at https://www.ecb.europa.eu/pub/pdf/other/ecb.financialintegrationineurope201705.en.pdf.

EMTER, L., M. SCHMITZ, AND M. TIRPÁK (2018): "Cross-Border Banking in the Euro Area since the Crisis: What is Driving the Great Retrenchment?" ECB Working Paper No. 2130, European Central Bank.

ESRB (2014): ESRB Handbook on Operationalizing Macroprudential Policy. March 2014. Available at https://www.esrb.europa.eu/pub/pdf/other/140303_esrb_handbook_mp.en.pdf.

ESRB (2019): Features of a Macroprudential Stance: Initial Considerations. April 2019. Available at: https://www.esrb.europa.eu/pub/pdf/reports/esrb.report190408_features_macroprudential_stance_initial_considerations~f9cc4c05f4.en.pdf.

EUROPEAN COMMISSION (2014): Legal Obstacles to the Free Movement of Funds between Institutions within a Single Liquidity Sub-Group. Report from the Commission to the European Parliament and the Council. Available at https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX:52014DC0327.

HERRING, R. J. (2007): "Conflicts between Home and Host Country Prudential Supervisors." In Evanoff, D., G. Kaufman and J. LaBrosse (eds.), International Financial Instability. Global Banking and National Regulation, World Scientific Studies on International Economics.

OSINSKI, J., K. SEAL, AND L. HOOGDUIN (2013): "Macroprudential and Microprudential Policies: Toward Cohabitation." IMF Staff Discussion Notes 13/5, International Monetary Fund.

PFEIFER, L., L. HOLUB, Z. PIKHART, AND M. HODULA (2017): "Leverage Ratio and Its Impact on the Resilience of the Banking Sector and Efficiency of Macroprudential Policy." *Czech Journal of Economics and Finance* 67(4), pp. 277–299.

SCHWARCZ, S. L. (2013). "Ring-Fencing." *Southern California Law Review* 87(1), pp. 69–110.

TURK-ARISS, R. (2017): "Heterogeneity of Bank Risk Weights in the EU: Evidence by Asset Class and Country of Counterparty Exposure." IMF Working Paper WP/17/137, International Monetary Fund.

Appendix

Table A1: Article 458 CRR in Practice

Country	**Description of measure**	**Measure becomes active on**
Article 458 CRR		
Belgium	A 5 percentage point risk-weight add-on for IRB banks' exposures to Belgian mortgage loans, and an additional risk-sensitive element consisting in targeting the risk profile of each (IRB) bank's (residential) mortgage portfolio (by applying a multiplicator to the risk weight of the residential mortgage loan portfolio).	30 April 2018
Finland	A credit institution-specific minimum level of 15% for the average risk weight on housing loans applicable to credit institutions that have adopted the IRB approach.	1 January 2018
Sweden	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 IRB approach.	31 December 2018

Source: ESRB

CNB WORKING PAPER SERIES (SINCE 2018)		
12/2019	Josef Bajzík Tomáš Havránek Zuzana Iršová Jiří Schwarz	*The elasticity of substitution between domestic and foreign goods: A quantitative survey*
11/2019	Martin Hodula Simona Malovaná Jan Frait	*Too much of a good thing? Households' macroeconomic conditions and credit dynamics*
10/2019	Martin Hodula Simona Malovaná Jan Frait	*Introducing a new index of households' macroeconomic conditions*
9/2019	Jiří Panoš Petr Polák	*How to improve the model selection procedure in a stress-testing framework?*
8/2019	Sebastian Gechert Tomáš Havránek Zuzana Iršová Dominika Kolcunová	*Death to the Cobb-Douglas production function? A quantitative survey of the capital-labor substitution elasticity*
7/2019	Alexis Derviz	*Coexistence of physical and crypto assets in a stochastic endogenous growth model*
6/2019	Dominika Ehrenbergerová Simona Malovaná	*Introducing macro-financial variables into semi-structural model*
5/2019	Martin Hodula	*Monetary policy and shadow banking: Trapped between a rock and a hard place*
4/2019	Simona Malovaná Žaneta Tesařová	*Banks' credit losses and provisioning over the business cycle: Implications for IFRS 9*
3/2019	Aleš Bulíř Jan Vlček	*Monetary policy is not always systematic and data-driven: Evidence from the yield curve*
2/2019	Dominika Kolcunová Simona Malovaná	*The effect of higher capital requirements on bank lending: The capital surplus matters*
1/2019	Jaromír Baxa Tomáš Šestořád	*The Czech exchange rate floor: Depreciation without inflation?*
19/2018	Jan Brůha Jaromír Tonner	*Independent monetary policy versus common currency: The macroeconomic analysis for the Czech Republic through lens of an applied DSGE model*
18/2018	Tomáš Adam Filip Novotný	*Assessing the external demand of the Czech economy: Nowcasting foreign GDP using bridge equations*
17/2018	Kamil Galuščák Jan Šolc Pawel Strzelecki	*Labour market flows over the business cycle: The role of the participation margin*
16/2018	Martin Hodula	*Off the radar: Exploring the rise of shadow banking in the EU*
15/2018	Lukáš Pfeifer Martin Hodula Libor Holub Zdeněk Pikhart	*The leverage ratio and its impact on capital regulation*
14/2018	Martin Gürtler	*What influences private investment? The case of the Czech Republic*
13/2018	Václav Hausenblas Jitka Lešanovská	*How do large banking groups manage the efficiency of their subsidiaries? Evidence from CEE*

12/2018	Simona Malovaná	*The pro-cyclicality of risk weights for credit exposures in the Czech Republic*
11/2018	Tibor Hlédik Karel Musil Jakub Ryšánek Jaromír Tonner	*A macroeconomic forecasting model of the fixed exchange rate regime for the oil-rich Kazakh economy*
10/2018	Michal Franta Tomáš Holub Branislav Saxa	*Balance sheet implications of the Czech National Bank's exchange rate commitment*
9/2018	Dominika Kolcunová Tomáš Havránek	*Estimating the effective lower bound on the Czech National Bank's policy rate*
8/2018	Volha Audzei Sergey Slobodyan	*Sparse restricted perception equilibrium*
7/2018	Tibor Hlédik Jan Vlček	*Quantifying the natural rate of interest in a small open economy – The Czech case*
6/2018	Václav Brož Michal Hlaváček	*What drives distributional dynamics of client interest rates on consumer loans in the Czech Republic? A bank-level analysis*
5/2018	Lukáš Pfeifer Martin Hodula	*Profit-to-provisioning approach for setting the countercyclical capital buffer: The Czech example*
4/2018	Ivan Sutóris	*Asset prices in a production economy with long run and idiosyncratic risk*
3/2018	Michal Franta	*The likelihood of effective lower bound events*
2/2018	Soňa Benecká Ludmila Fadejeva Martin Feldkircher	*Spillovers from euro area monetary policy: A focus on emerging Europe*
1/2018	Jan Babecký Clémence Berson Ludmila Fadejeva Ana Lamo Petra Marotzke Fernando Martins Pawel Strzelecki	*Non-base wage components as a source of wage adaptability to shocks: Evidence from European firms, 2010-2013*

CNB RESEARCH AND POLICY NOTES (SINCE 2018)

4/2019	Tomáš Konečný Lukáš Pfeifer	*Macroprudential ring-fencing*
3/2019	Petr Polák Jiří Panoš	*The impact of expectations on IFRS 9 loan loss provisions*
2/2019	Jan Filáček Ivan Sutóris	*Inflation targeting flexibility: The CNB's reaction function under scrutiny*
1/2019	Iveta Polášková Luboš Komárek Michal Škoda	*The contemporary role of gold in central banks' balance sheets*
1/2018	Mojmír Hampl Tomáš Havránek	*Central bank financial strength and inflation: A meta-analysis*

CNB ECONOMIC RESEARCH BULLETIN (SINCE 2018)	
November 2018	*Interest rates*
May 2018	*Risk-sensitive capital regulation*

Czech National Bank
Economic Research Division
Na Příkopě 28, 115 03 Praha 1
Czech Republic
phone: +420 2 244 12 321
fax: +420 2 244 12 329
http://www.cnb.cz
e-mail: research@cnb.cz
ISSN 1803-7097