Financial and Economic Review, Vol. 14 Issue 4., December 2015, pp. 57–86.

Micro- and macroprudential regulatory instruments compared across the European Union*

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The study investigates how active Hungarian micro- and macroprudential regulation is in an international comparison. Based on national regulatory notifications, our analysis summarises the types of national derogation and the reasons for their application, and presents the forms in which they are applied in individual Member States. Additionally, it provides an overview of the relationship of regulatory activity with the risk profile of each state. As a consequence it is stated that Hungary has shown outstanding activity in terms of both micro- and macroprudential regulation, due to the significant number of systemic risks.

Journal of Economic Literature (JEL) Classification: F38, G21, G28, N24

Keywords: banking regulation, European Union, national derogations

1. Introduction

Over the past 25 years, the European Union has made spectacular efforts to unify the regulation of the financial sector and in particular credit institutions. The unified regulation is provided partly through directives to be implemented on a mandatory basis, and partly through directly applicable regulations. The EU regulation setting out the prudential requirements for credit institutions and investment firms effective from 2014 (the so-called CRDIV/CRR[1] regulation), and the consequences of the economic crisis calling for these regulatory efforts have significantly reshaped the regulatory environment. Given the need to prevent the reoccurrence of the excessive risk taking characterising the pre-crisis period and of the resulting systemic risks, the micro- and in particular the macroprudential regulatory instruments have gained significance, and the adoption of CRDIV/CRR

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* The views expressed in this paper are those of the author(s) and do not necessarily reflect the offical view of the Magyar Nemzeti Bank.

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The authors wish to thank Péter Fáykiss and Anikó Szombati for their valuable comments on this paper. The proofreading of the paper was made by the authors.

[1] CRDIV: Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, amending Directive 2002/87/EC and repealing Directives 2006/48/EC and 2006/49/EC,
CRR: Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation, available at http://ec.europa.eu/finance/bank/regcapital/legislation-in-force/index_en.htm

established an integrated regulatory framework in Europe. In both fields, however, derogations remain apparent in the regulatory practices of individual countries, primarily owed to the differences in their institutional systems and in the risks faced.

Our comparative analysis scrutinises these derogations: focusing primarily on the activities of EU Member States, we assess the differences between individual countries in terms of their application of micro- and macroprudential regulatory instruments. Based on the assessment, several groups of countries can be distinguished, each showing varying levels of activity in both fields due to the differences in their risk profiles. In our assessment, we relied primarily on the information published by European authorities of banking supervision.

2. National derogations in microprudential regulation

2.1. Background

National derogations from the standardised EU banking regulation may be considered in both a narrower and a broader sense. In a narrower sense, national derogations are understood as differences expressly allowed under CRDIV and CRR, where each Member State, the national supervisory authority, or the credit institution applying the rule determines whether to make the derogation concerned. In a broader sense, national derogations include all additional regulatory derogations which may be made by Member States in the absence of common EU regulations, and are closely related to the operational rules of credit institutions (derogations in accounting, corporate and civil law). In Section 2.2, this paper focuses on the national derogations provided for in CRDIV/CRR, while Section 2.3 mentions additional national derogations outside the scope of CRDIV/CRR.

Some of the national derogations provided for in CRDIV/CRR are relevant only to one country or a few countries, and were generally included in the legislation so that the countries concerned did not need to apply drastic changes to previously developed financial products (e.g. Finnish building societies, the Danish mortgage bond market, French special purpose vehicles). Other national derogations were included in the legislation because legislators had not been able to reach a final agreement on certain issues, and in the absence of an agreement, they dispensed with the consistent application of the rule concerned.

Although national derogations weaken competitive neutrality, they smooth differences between EU and national legislation and practices. As a positive effect of national derogations, this enables the extremely complex system of requirements set out in CRR to be applied in all Member States. Since these differences are expected to prevail in the long term, the question arises whether the number of options and national discretions may decrease in the near future.

In 2015, the EU Commission issued a delegated act on the subject of liquidity regulation to specify a number of additional national derogations. Since these have not been aggregated at EU level to date, they will not be addressed in our paper.[2]

2.2. National derogations in microprudential regulation allowed under CRDIV and CRR

As indicated in the foregoing, while the EU recognises the necessity of national derogations, it has been making attempts to confine them within a regulated framework. The system of national derogations had also been operational previously, but the system of EU legislation clearly points towards standardisation. Among other features, this is indicated by the progress made since the initial period of banking regulation, where common requirements were set out in minimum harmonisation directives: today, the vast majority of EU requirements are set out either in maximum harmonisation directives, or in directly applicable regulations. The establishment of the single supervisory manual and of the banking union has clearly pointed to uniformed regulation and enforcement.

Nevertheless, several possibilities still exist for derogations the fundamental rules laid down in the CRDIV and CRR. These include derogations granted to individual institutions[3], Member States' discretionary decisions, as well as options and national discretions of competent authorities.

In derogations granted to individual institutions, in the cases specified in CRDIV/CRR, derogations from the general rules may be made with regard to the specific circumstances of an institution, normally at the request of the institution concerned. Member States' discretionary decisions include derogations where the decision is made by the Member State itself rather than the supervisory authority, and is incorporated into an act or other lower-level national legislation. The two main groups of options and national discretions include the transitional measures provided for by national supervisory authorities, and the national derogations required for the continuous application of the CRR.

In determining how strictly national derogations are applied by the regulatory authority and the MNB in Hungary in comparison with other EU Member States, the following summary observations can be made:

i. As regards derogations granted in individual cases, we have no means to formulate a meaningful opinion at this point, since no information is available on the derogations made by individual EU Member States in such cases, and

[2] *Available at http://eur-lex.europa.eu/legal-content/HU/TXT/HTML/?uri=CELEX:32015R0061&qid=1446538552039&from=EN*

[3] For the purposes of this paper, institution shall have the meaning ascribed to it in CRDIV, comprising credit institutions and investment firms.

the MNB's practice also has to be finalised yet. In derogations granted to individual institutions, in the cases specified in CRDIV/CRR, derogations from the general rules may be made with regard to the specific circumstances of an institution. Since such decisions are adopted with regard to the specificities of the institution concerned rather than those of the Member State, this topic will not be addressed in greater detail in this paper.

ii. In the case of Member States' national discretionary decisions, the main decision-maker is the Ministry for National Economy (MNE), and the rules are established by Parliament on the basis of its bills (Member States may delegate their discretionary powers to other authorities as well). In the context of CRDIV/CRR, Hungary tends to opt for stricter regulations in some cases (e.g. maintenance of its own national liquidity regulations, imposition of reporting requirements on branches), and more permissive regulations in other cases (e.g. allowing for equity of EUR 1 million, individual exemptions from compliance).

iii. In connection with the transitional measures related to the CRR, the MNB Decree, with a few exceptions (such as share buybacks and the deduction of equity instruments issued for the artificial increase of own funds), gives Hungarian credit institutions the favourable alternatives provided by the CRR, regarding which a similar approach is generally taken by one-third of EU Member States. Due to recent amendments to the MNB Decree on transitional measures, the transitional rules have been reviewed, and from 2016 onwards, Hungary will definitely be among the EU Member States that apply stricter rules in this field.

iv. In the case of national discretions related to the continuous application of CRR, stricter derogations relative to the general provisions are applied by only few Member States for the time being. In Hungary, derogations in a stricter direction may potentially be made by the MNB in respect of applying higher risk weights to exposures secured by mortgage, stricter criteria for the application of preferential weights, and stricter rules for large exposures to institutions; however, the decisions on these issues have not yet been adopted.

The European Banking Authority (EBA) has been playing a leading role in coordinating national derogations where the decisions are made by national supervisory authorities. One of the most important means of that is disclosure, as part of which the national supervisory authority notifies the EBA about the options and national discretions applied in the Member State concerned. The EBA collects this information and publishes it on its website (*EBA 2015*). Additionally, all national supervisory authorities, including the MNB in Hungary, publish such decisions on their own websites.[4] Although coordination by the EBA is primarily focused on derogations based on supervisory decisions, the information disclosed

[4] *http://mnb.hu/en/supervision/regulation/supervisory-disclosure*

also includes some Member States' discretions. The scope and structure of information to be disclosed by national supervisory authorities is governed by a specific regulation of the EU Commission[5]. The table published by the EBA lists a total of 68 such national derogations[6], including those available under CRDIV and those referred to the discretion of national supervisory authorities under the CRR. In a 2009 report, the CEBS (Committee of European Banking Supervisors, the EBA's predecessor) identified 152 such national derogations in respect of the capital requirements applicable at the time (*CEBS 2009*). As the CEBS report aimed specifically to propose means to the EU Commission for reducing the number of national derogations, the new regulations have clearly succeeded in doing so.

Following the establishment of the banking union, the European Central Bank (ECB) also became interested in ensuring that in countries of the banking union, national derogations should preferably be applied consistently, since the diversity of requirements across Member States would impair the effectiveness of a single European supervisory function. For that reason, the ECB collected the national derogations allowed under CRDIV/CRR, and developed proposals for their application by Member States. The ECB's material is soon to be released for public consultation, and is aimed at the achievement of consistent enforcement in countries of the banking union.

Information available on the EBA's website has been used to compile the following table, which provides a summary of how individual Member States have applied the most important national derogations in microprudential regulation. Items marked yellow indicate national derogations allowing stricter requirements, while those marked green indicate national derogations allowing more permissive requirements relative to the general rules of the EU. The sum of such regulations shows how active each Member State is in the application of national derogations.

As the information in the table is based on the provisions in effect in 2015, it is important to note that the MNB has amended its decree on transitional provisions as of 1 January 2016. From 2016 onwards, the decisions by the national supervisory authority provided for in the CRR in respect of transitional measures will not longer be in effect. Consequently, in essence the CRR will become fully applicable in Hungary without any further transitional measures (except for a few transitional provisions set out in the CRR itself). Following the repeal of these transitional measures, Hungary will join the countries that apply stricter national derogations.

[5] Commission Implementing Regulation (EU) No 650/2014 of 4 June 2014 laying down implementing technical standards with regard to the format, structure, contents list and annual publication date of the supervisory information to be disclosed by competent authorities according to Directive 2013/36/EU of the European Parliament and of the Council.

[6] Some sources refer to 103 derogations, depending on the method of selection.

Table 1
Application of key options and national discretions in individual EU Member States

	Key discretions	HU	BG	CZ	PL	RO	SK	CI	EE	HR	LT	LV	MT	SI	AT	BE	DE	DK	EL	ES	FI	FR	UK	IE	IT	LU	NL	PT	SE
National discretions by Member States in CRDIV/CRR	Waiver for credit institutions on the application of certain CRR prudential requirements on individual basis	Y	N	N	NA	Y	N	Y	N	NA	N	N	N	N	Y	Y	N	N	Y	N	N	Y	N	Y	N	Y	Y	Y	N
	Maintaining national liquidity requirements	Y	Y	N	NA	Y	N	N	N	Y	NA	Y	Y	Y	Y	N	Y	Y	NA	NA	N	Y	Y	Y	N	Y	Y	NA	Y
	Lower initial capital requirement for certain type of credit institutions	Y	N	Y	NA	Y	N	Y	N	Y	N	N	N	Y	N	N	N	N	N	Y	N	Y	Y	Y	N	N	N	N	Y
	Requirement of periodic reports from branches of credit institutions registered in another Member State	Y	Y	Y	NA	Y	Y	Y	Y	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	N	Y	N	Y	N	Y	N
Transitional provisions of CRR	Transitional inclusion of unrealized gains	Y	Y	N	NA	Y	N	N	N	N	N	Y	Y	Y	Y	Y	Y	N	NA	Y	N	Y	NA	Y	Y	N	Y	Y	N
	Transitional deduction of unrealized losses	Y	Y	N	NA	N	N	N	N	N	N	N	N	Y	N	Y	Y	N	N	Y	N	N	N	Y	Y	NA	Y	Y	N
	Transitional deductions from own funds	Y	Y	N	NA	N	N	Y	N	N	N	N	NA	Y	N	N	Y	N	N	N	N	Y	N	Y	N	N	Y	Y	N
	Transitional deduction of deferred taxes	Y	Y	N	NA	Y	N	Y	N	N	N	N	Y	Y	N	N	Y	Y	Y	Y	N	Y	N	Y	N	Y	Y	Y	N
	Faster exclusion of capital elements which do not meet new CRR conditions	N	N	Y	NA	N	Y	N	Y	Y	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Options and national discretions for ongoing application of CRR	Higher risk weights or stricter conditions for exposures secured by mortgages on residential property	N	Y	N	Y	N	N	N	N	Y	N	N	Y	Y	N	N	N	NA	N	N	N	NA	N	Y	N	N	N	NA	N
	Higher risk weights or stricter conditions for exposures secured by mortgages on commercial immovable property	N	Y	N	NA	Y	N	N	N	N	N	Y	N	N	N	N	N	N	N	N	N	NA	Y	Y	N	N	N	NA	Y
		N	N	N	NA	N	N	N	N	N	N	Y	N	N	N	N	N	Y	N	N	N	NA	N	N	N	N	N	N	N
	Lower large exposure limit for exposures to institutions	N	N	N	NA	N	Y	N	N	Y	N	N	N	Y	N	N	N	N	NA	N	N	N	N	Y	N	N	N	N	N
	Application of supervisory measures to institutions with similar risk profiles (CRD Art.103)	Y	N	N	N	Y	N	N	N	N	N	N	N	N	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	Y
	Number of measures to make national regulation stricter	3	4	2	1	4	3	1	2	5	0	4	3	4	2	2	2	3	1	1	0	2	2	5	0	2	1	1	3
	Number of measures to make national regulation softer	6	4	1	0	4	0	4	0	1	0	1	2	5	2	3	4	1	2	4	0	5	1	6	2	2	5	5	1
	Number of measures	9	8	3	1	8	3	5	2	6	0	5	5	9	4	5	6	4	3	5	0	7	3	11	2	4	6	6	4

Source: based on EBA (2015a)

The most important discretionary decisions by Member States, the transitional measures, as well as the options and national discretions required for the continuous application of the CRR are described below.

2.2.1. Member States' discretionary decisions

Member States' discretionary decisions include derogations where the decision is made by the Member State itself rather than the supervisory authority, and is incorporated into an act or other lower-level national legislation. (For example, in Hungary the Credit Institutions Act regulates the items that may be exempted from the application of the large exposure limit.) CRDIV/CRR provide for a relatively narrow scope of such measures, given that EU legislation generally grant Member State derogations to national supervisory authorities. The most important measures include the following:

In CRR:

i. Maintenance of previous national regulations on the exemption of credit institutions affiliated to a central body from individual compliance with specific prudential rules of the CRR, provided that such regulations are not inconsistent with the provisions of the CRR. Based on data published by the EBA, 11 countries (including Hungary) have indicated their intention to apply this derogation. Since this type of derogation is primarily applied in countries where co-operative credit institutions exist and are subject to regulated integration, the derogation is expected to be sustained in the long term despite being applied in less than one-half of EU Member States.

ii. Member States have been authorised to maintain national liquidity requirements until EU-level liquidity regulations (LCR, NSFR) take full effect, allowing Hungarian provisions for the balance sheet and deposit coverage ratios and the exchange funding adequacy ratio (DMM) to remain in effect. Apart from Hungary, an additional 15 Member States have been maintaining their own liquidity regulations until the LCR and the NSFR become effective, which clearly indicates the increased significance of liquidity regulations in the aftermath of the crisis.

iii. Until the end of 2028 the latest, Member States may specify the exposures they wish to exempt from the limits on large exposures, however, such exposures may only be selected from the list provided in the CRR (e.g. exposures to parent undertakings). Such items may also remain exempt after 2028, but the relevant decisions will be adopted by the national supervisory authorities. Since data published by the EBA address each possibility of exempting large exposures separately, the only conclusion that may be drawn from the information is that exemptions are not granted on a consistent basis in Member States. The only similarity observed is that less significant possibilities for exemptions were applied by a smaller number of Member States.

In CRDIV:

i. The minimum initial capital requirement for credit institutions is generally EUR 5 million, allowing Member States to set a lower level in certain cases, which cannot be lower than EUR 1 million. This point makes it possible for co-operative credit institutions to be established with equity as low as HUF 300 million. Such derogations are allowed in an additional 10 Member States, presumably also primarily in respect of the co-operative sector.

ii. Member States may decide to maintain their requirements for regular reporting by branches of credit institutions registered in other Member States. The Hungarian branches of credit institutions registered in the EU submit regular reports to the MNB, and there are only seven EU Member States where this derogation is not applied.

2.2.2. Options and national discretions

Options and national discretions can be classified into two main groups. The first group includes transitional measures adopted by national supervisory authorities relating to the progressive implementation of the CRR, which may vary by Member State (e.g. the progressive de-recognition of items no longer qualifying as own funds). As such rules are established by Member States' supervisory authorities, in Hungary transitional measures are set out in an MNB Decree[7]. The other main group of options and national discretions includes rules, also established by national supervisory authorities, which are required for the continuous application of the CRR (e.g. the specification of a materiality threshold for the definition of default).

The two groups include the following key national derogations.

2.2.2.1. Transitional rules

The CRDIV/CRR regulatory framework brought such major changes in the regulation of credit institutions that not all institutions could be reasonably expected to ensure immediate compliance with the significantly increased capital requirements and other provisions. Therefore, similarly to the Basel Committee's guideline, EU legislation also offer the possibility of progressive implementation. In several cases, the transitional rules are set out in the CRR itself (e.g. the gradual implementation of liquidity requirements); however, in respect of determining

[7] Decree No. 10/2014 by the Governor of the Magyar Nemzeti Bank (IV. 3.) on own funds requirements, on unrealized gains and losses measured at fair value, on deductions related to unrealised gains and losses and on grandfathering of equity instruments.

own funds, most decisions concerning transitional measures are adopted by national supervisory authorities.

The most important discretional decisions on transitional measures concern the following:

i. *Unrealised gains and losses:* The CRR has adjusted the own funds qualification of unrealised gains and losses relating to institutions' assets and liabilities measured at fair value in the balance sheet. The principle previously applied was that while such unrealised gains would not qualify as own funds, identifiable losses would be deducted. In order to ensure that the value of own funds should better reflect the actual situation, the CRR has allowed unrealised gains relating to institutions' assets and liabilities measured at fair value to qualify as own funds, requiring similar unrealised losses to be deducted at the same time. However, since this amendment would have resulted in significant changes in credit institutions' own funds, national supervisory authorities may grant a transitional period of 4 years for the implementation of the new rules, which means that the new regulations will take full effect from 2018 onwards. In its Decree, the MNB granted the possibility of applying the transitional period in respect of both gains and losses; however, from 2016 onwards, gains and losses will be recognised without regard to the transitional rules. There have been major differences in EU Member States' treatment of gains and losses. A transitional period of the deduction of losses was granted by only 38% of EU Member States (i.e. the majority of Member States required the total amount of unrealised losses to be deducted promptly). Conversely, the progressive qualification of gains as own funds (at 40%, 60%, then 80%), was allowed in 66% of the Member States, whereas in the rest of the Member States unrealised gains qualify as own funds only following expiry of a 3-year transitional period.

ii. *Deductions from own funds:* In CRR, in the calculation of own funds it meant a significant tightening that most of the deductions from own funds (e.g. losses sustained during the year, intangible assets) are no longer deducted from the entire own funds or the Tier 1 capital, rather directly from the common equity Tier 1 capital. Since in the new regulation common equity Tier 1 capital has been assigned special importance, therefore this method of deduction adversely affected those credit institutions for which the share of additional Tier 1 and Tier 2 items is high in the capital. In order for this significant change to manifest not instantly, rather protracted in time, the national supervisory authorities may define a transitional period of 4 years, during which only part of the deductions have to be made from the common equity Tier 1 capital. It is important to note that this temporary rule primarily improves the capital ratios of those credit institutions that possess additional Tier 1 capital, since the deduction has to be made in any case, the transitional rule only enables the performance of the deduction not from the common equity Tier 1 capital, rather from the Tier 1 capital. In Hungary the MNB permitted the application of this transitional rule, but its actual effect is low, since there are only one or two credit institutions that have significant additional Tier 1 capital providing coverage for the deductions. The Hungarian transitional rules are special in that the MNB did not allow the application of the transitional rule to certain type of deductions (especially repurchased own shares and capital instruments serving the artificial increase of the capital), rather the deduction must be made instantly from the common equity Tier 1 capital. From 2016 even these transitional rules will be terminated in Hungary. In the EU only 35% of the member states applied transitional rules for the deductions to be made from the common equity Tier 1 capital, but this should not be interpreted at all to mean that these countries apply uniform rules, since the Hungarian practice also shows that there may be additional differences among the details.

iii. *Deferred tax assets:* Deferred tax assets that rely on future profitability and arise from temporary differences are also subject to special rules. The Basel and EU rules enabled the deduction of such claims because they can be actually applied only if the institution becomes profitable in the future, and it can take into account these items when calculating its tax liability. Owing to this factor of uncertainty, deferred tax assets must be deducted from the common equity Tier 1 capital. However, in several credit institutions instant deduction would have resulted in a significant loss of capital, therefore CRR enables the gradual introduction of the deduction, in the space of four years. An even longer transitional period, i.e. ten years, is allowed in the case of those deferred tax assets that had already existed prior to 1 January 2014. In Hungary the MNB enabled the application of this transitional period for credit institutions, but since there are relatively few credit institutions that hold significant deferred tax assets, therefore the impact of the transitional action is also limited to a few credit institutions, and from 2016 this transitional benefit will be terminated owing to the amendment of the MNB decree. In the EU 56% of the Member States enabled the application of a transitional period of 4 years and 74% of a period of 10 years, i.e. there have been several member states that have only authorized the gradual implementation of the deduction for deferred tax assets that already existed prior to 1 January 2014.

iv. *Phasing out the capital instruments not compliant with the new rules:* CRR has fundamentally rearranged the requirements for elements of own funds, and they have become not only more detailed, but also much more stringent. The requirements applying to elements of own funds are built on loss absorbance, permanence and the flexibility of payments. Owing to the tightening of the conditions, some of the instruments formerly classified as Tier 1 capital may only be assigned to additional Tier 1 capital or to Tier 2 capital, in exceptional cases it may also happen that they can no longer be assigned to any capital element. Due to the highlighted role of the common equity Tier 1 capital, therefore the instant implementation of the conditions could have meant in certain credit institutions that they would not be able to comply with the minimum requirements. After 1 January 2014, the entities had to assess to which category the capital instruments issued by them earlier can be assigned under the new regulation. The CRR enables the national supervisory authorities to authorize that the capital elements issued by the institutions prior to 31 December 2011 and acknowledged pursuant to the statutes applicable at that time in the calculation of the own funds, but no longer qualifying as common equity Tier 1 capital, additional Tier 1 capital and Tier 2 capital requirements of CRR, can be phased out from the appropriate category of the own funds gradually, over a transitional period of 8 years. The date of 2011 was necessary because by that time it had become clear for the credit institutions as well that the conditions of acknowledgment as own funds would be tightened. The MNB allowed the application of this transitional rule in its decree (from 2016 this benefit will be terminated) and each of the EU member states has applied it, although as many as five member states have defined a faster pace of phasing out compared to the normal schedule (starting from 80%, the eligible amount is reduced by 10% annually).

2.2.2.2. Options and national discretions necessary for the continoust application of CRDIV/CRR

The options and national discretions mentioned earlier and applying to the transitional provisions will be gradually phased out or their significance will decrease. However, CRDIV/CRR contains several additional options and national discretions that are necessary for continous application. The most important of these items are the following:

i. *In the case of exposures secured by real estate property:* The receivables that were secured by mortgage registered on residential properties or commercial properties have always been assigned a favourable risk weight in the standard method. Under the rules of CRR, if a loan is secured by a mortgage registered on a residential property, then a weight risk of 35%, if the mortgage is registered on a commercial property, then a risk weight of 50% may be applied. CRR does not provide an exact definition for commercial property, but essentially every real property can be assigned to this category that is not considered a residential property (e.g. plants, arable land, holiday homes). CRR also provides additional detailed conditions for the application of risk weight, for example, the loan-to-value ratio (LTV) should not exceed 80%, or the value of the property should not depend on the creditworthiness of the borrower. However, CRR authorizes the national supervisory authorities to define a risk weight that is higher than the favourable risk weights but does not exceed 150%, or to impose more strict conditions for the application of the favourable risk weight. These measures could be in order if, according to the position of the supervisory authority, the values of 35% or 50% do not reflect the actual risks appropriately (e.g. real property prize bubbles have developed). In Hungary the MNB law also grants this right to the MNB, however, so far the risk weight has not been raised and more strict conditions have not been set up, either. According to the information published by EBA, there has not yet been any Member State that would have assigned a higher risk weight to receivables secured by residential property, but there are as many as six member states that have formulated additional requirements compared to CRR for the application of the favourable risk weight. The national supervisory authorities have proceeded in a more stringent manner concerning receivables secured by residential property, because there are 4 EU Member States (IE, LV, RO, SE) that prescribe a higher, 100% risk weight instead of 50%. And there are two Member States (BG, GB) where more stringent conditions are required for the application of the favourable weight. There is no overlap between the two country groups, that way there are altogether 6 EU Member States that apply more stringent requirements or risk weight compared to the general CRR rules to exposures secured by commercial properties.

ii. *Definition of a higher LGD value:* CRR requires the national supervisory authorities to collect data about exposure and loss values related to real property lending. Based on these data, and also taking into account the expected future development of the real property market and any other relevant indicator, they have to assess, at least annually, whether the minimum LGD values applying to the exposures secured by residential and commercial properties located in their areas, as defined in CRR[8] are adequate. According to CRR, in the case of exposures secured by residential properties, the minimum LGD value is 10%, in the case of commercial properties it is 15%. If, based on the information, in the opinion of the supervisory authority in the given Member State the minimum LGD value according to CRR is not adequate, they may also prescribe a higher minimum value. The LGD value only has relevance for capital requirement calculation in the case of credit institutions applying an internal rating based approach. If the national supervisory authority defines a higher minimum LGD value, then it is required to notify EBA accordingly, and EBA will also publish these values. CRR does not leave the relevant decision to the national supervisory agency entirely, because according to the proposal of EBA, the EU Commission will issue a regulation applying to those conditions that the

[8] "Loss given default (LGD)": the ratio between the loss occurring owing to the fault by a partner and related to exposure, and the receivable existing at the time of the default.

competent authorities have to consider when defining a higher minimum LGD value. This regulation has not been published yet, it is expected to be released in the second part of 2015. According to the data published by EBA, so far higher minimum LGD values have been defined in two EU member states in the case of exposures secured by residential property (in Denmark, applying to those residential properties that are located in Norway, and in Latvia), and in the case of exposures secured by commercial properties only one such raise has been made (in Latvia, 16.12% instead of 15%).

iii. *Lower large exposure limit to exposures to institutions:* It is the fundamental rule for the assumption of large exposure that the total amount of exposures to one client or group of clients must not exceed 25% of the eligible capital[9] of the bank. This is the general rule, however, owing to the characteristics of the interbank market and in an effort to facilitate transactions of banks among one another, in the case of exposures to institutions in CRR this rule is supplemented by the provision that the limit to the assumption of large exposure is the higher of 25% of the eligible capital or the amount of 150 million euros. In practice, under this rule, if the eligible capital of a bank is less than 600 million euros (approximately 185 billion HUF), then for this bank the exposure to one institution may exceed 25%, although owing to a supplementary rule, this must not be higher in any case than 100% of its eligible capital. The institution itself has to set up the limit.

iv. Assessing the EU Member States, it can be determined that so far only four Member State have introduced limit values lower than 150 million euros. In Hungary no decision has yet been made on this, it will be defined by the MNB in a decree. Since it is also a characteristic feature of domestic credit institutions that they operate with an eligible capital that is significantly lower than 600 million euros, and there are only five banks in Hungary concerning which the eligible capital exceeds HUF 185 billion, therefore it may be worth considering that a threshold value lower than 150 million euros should also be introduced in Hungary as well.

v. *Application of supervisory measures to institutions with similar risk profiles:* CRD and based on it, Hpt. also provides an opportunity for the national supervisory authorities to apply certain aspects of the supervisory review process uniformly in respect of similar institutions. A typical case in this point is the system of risky portfolios defined by the MNB related to the SREP process and published, concerning which the MNB imposes additional capital requirements uniformly, applying to each institution (e.g. balloon/bullet loans, multiple restructuring).

[9] The value of the eligible capital is based on own funds, but its calculation is slightly different.

Based on the data sent to EBA, only a small number of supervisory authorities apply a similar practice, therefore from this aspect the Hungarian SREP is certainly more strict and also more transparent than in other EU member states.

2.3. Other national derogations

National derogation in a broader sense could also be considered to include those legal requirements concerning which there is no uniform EU regulation and the Member States are free to impose obligations.

In Hungary a typical example fro such derogation is the handling of the problems deriving from foreign currency based lending, which was assigned a significantly lower regulatory importance in the rest of the Member States. The EU has no uniform system of rules for reducing foreign currency based retail lending, only a recommendation by the European Systemic Risk Board – ESRB) was published on the subject, in addition, it was quite belated and was not suitable for preventing the emergence of the problem. The Hungarian steps, especially including the tightening of foreign currency based retail lending, then its suspension, the final loan repayment, the implementation of the pool account and the conversion into forint, were all independent initiatives that contributed beneficially to the stability of the domestic financial system through reducing the FX rate exposure of the retail sector.

However, in addition to the many harmful impacts, domestic foreign currency based retail lending also had a beneficial consequence, as in Hungary consumer protection requirements received much more attention than earlier, and on several subjects these requirements are more stringent than the EU standards (e.g. the EU will only require the implementation of common consumer protection rules on mortgage credits from March 2016, while the overwhelming majority of these rules have been in effect in Hungary for several years).

The above example also shows that in the European Union, in addition to the common regulations, there are several areas where the creation of detailed rules implemented at national level is possible and needed.

We can mention several other examples as well where, in addition to the common regulation, there are significant differences in the regulations of the Member States, such as:

i. *Company law*: in certain countries there are separate supervisory boards and boards of directors, similarly to Hungary, in other countries there is a one-tier system of governance,

ii. *Taxation, duties:* the levy on banks or the financial transaction duty has not been introduced in each EU Member State and their rates are not harmonized either, in addition, there are significant differences in the taxes of bank profits and in the burdens of the employed labour force,

iii. *Accounting:* the EU did not require the application of IFRS as an obligatory accounting tool, it is only obligatory for public companies, but in certain countries the banks are required to apply IFRS, while in others the national accounting standards remain applicable,

iv. *Civil law*: there are differences in the enforcement of a mortgage, this is also important because the risk management of the bank must also be prepared that in the case of a mortgage loan provided in another EU Member State, the method of acceptance as a collateral and the enforceability according to the statutes applicable in the given country has to be assessed carefully,

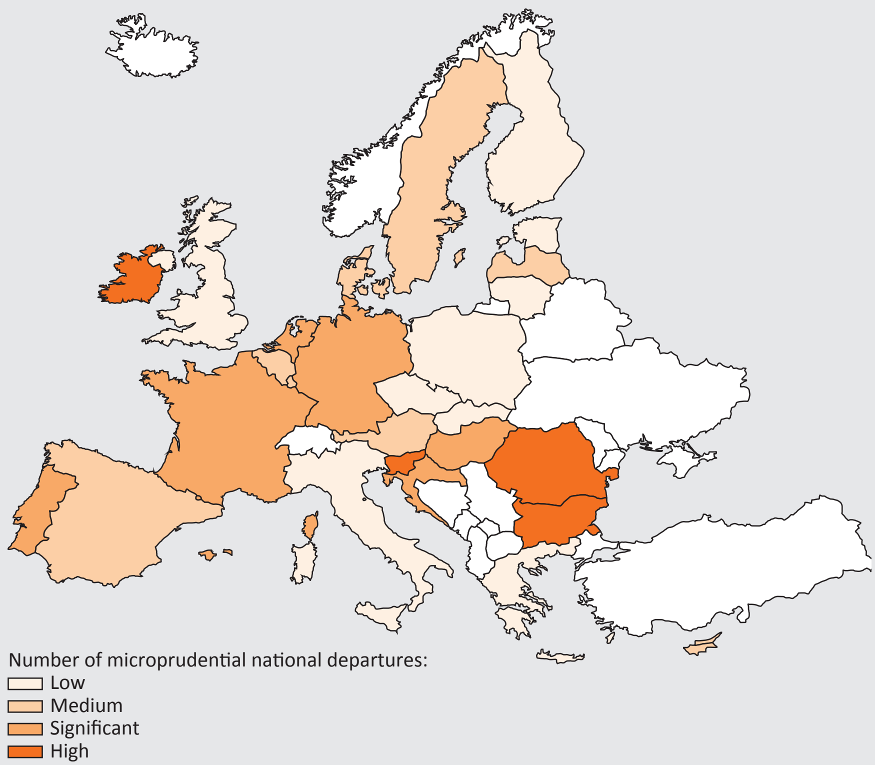
v. *Scope of institutions under supervision:* the scope of institutions subject to supervision by the supervisory authorities of the Member States has become a point of special importance especially because of the increased significance of the shadow banking sector. For example, financial enterprises are not subject to such a tight supervision in all Member States as in Hungary, but there are differences in the case of other types of institutions as well,

vi. *Separation of banking and investment service activities:* as a result of the global financial crisis efforts have been initiated in several countries for separating these two types of activity. The Commission of the EU also deals with this matter, but no uniform and final statute has yet been developed,

vii. *Credit institution branch of a third country:* the EU legislation allow that a credit institution registered in a non-EU Member State may establish a branch in a Member State, but the consequences of that are not regulated clearly. The EU legislation only requires that such a branch must be no be given a more preferential treatment than a branch from an EU Member State. The practice shows that in the individual Member States different prudential requirements apply to bank branches from third countries,

viii. *Supervisory review process*: the national supervisory authorities have a powerful tool for defining additional capital requirements of the institutions individually. In case of banking groups the ultimate decision on the group level capital requirement lies with the home supervisory authority, but if a host authority can reach an agreement with the home supervisor, it may apply more stringent capital requirement for a subsidiary in a given country. A special incentive for the host countries to impose higher capital requirements for subsidiaries, that the additional capital means more safety for the institution, but the raise of the capital is performed usually not at local, rather at group level. In order to apply the supervisory review process uniformly, in December 2014 EBA published a guideline, which unifies the processes of the supervisory authorities of EU Member States on several matters (e.g. the templateof the resolution to impose an addititonal capital requirement). Additionally, in the system of the banking union it is ECB, as the single European supervisory authority that ensures the uniform application of the supervisory review process, however, in the case of countries and credit institutions outside of the banking union there is still ample room for national derogations.

Figure 1.
Application of microprudential national departures by country in the EU



Source: The author's own analysis based on EBA (2015a)

3. Macroprudential measures in European comparison

3.1. The scope of macroprudential tools available for EU member states

The basis for the treatment of systemic risks was established by the Basel III recommendation that defined the global prudential standards. After the analysis of the causes and consequences of the crisis, the macroprudential toolset facilitating the treatment of contagious effects occurring at systemic level and that of procyclicality, became part of the Basel recommendations. It is the framework provided by CRDIV/CRR that performs the adaptation of the new Basel requirements to the financial intermediary system of the Union and to the operation of the internal market, furthermore, its adaptation to the legislative system by the necessary amendment and the gradual implementation of the recommendations. The at EU level harmonized tools specifically dedicated to prevent or contain the systemic risks threatening financial stability occured first in that regulatory package. Previously the options for such intervention set by law were limited available at national level.

Within the framework of the uniform European set of rules the following specifically macroprudential tools may be used:

i. Countercyclical capital buffer (*CRD Article 130*): in addition to the rest of the capital requirements, the maintenance of this buffer may be required depending on the state of the credit cycle, to ensure that credit institutions should hold back their lending activity and accumulate sufficient capital in the economic upswing to become more resilient to losses and to reduce the decrease of their lending activity during times of stress. The capital requirement must be primarily fulfilled by the Common Equity Tier 1 capital;

ii. Systemic risk buffer (*CRD Article 133*): an additional capital requirement applicable for the prevention and mitigation of such unregulated, non-cyclical systemic risks that carry the danger of the disturbance of the financial system. The capital requirement must be primarily fulfilled by the Common Equity Tier 1 capital;

iii. Additional capital requirements applying to global and other systemically important institutions (G-SII and O-SII) (*CRD Article 131*): a capital requirement that may be mandated for systemically important financial institutions, its purpose is to provide a counter-incentive to the excessive growth of certain institutions, to mitigate the market distortions arising from the „too big to fail” problem, and by improving their loss-absorbing capacity, to reduce their probability of default and the negative externalities occurring in the case of insolvency. The capital requirement must be primarily fulfilled by the Common Equity Tier 1 capital;

iv. Earlier implementation of the liquidity requirements (*CRR Article 412*).

If such changes occur in the intensity of systemic risks in the financial system that may have significant negative consequences on the financial system and real economy of the given member state, the following opportunities that may be initiated in a separate procedure (subject to the approval of the commission) are available for the member states (*CRR Article 458*): *(i)* raising the level of own funds requirements, *(ii)* tightening of the requirements for large exposure, *(iii)* increasing the capital conservation buffer, *(iv)* tightening of the liquidity reserves, *(v)* increasing the net stable resource supply requirements, *(vi)* change of the risk weights applying to residential and commercial properties, in order to manage asset price bubbles.

In addition to the above, on the basis of national legislation additional macroprudential tools may also be applied, such as debt brake rules and liquidity rules outside the framework of the CRDIV/CRR regulation.

3.2. The macroprudential regulatory activity of EU member states

Based on the notifications sent by the member states and other countries of the EEA, the ESRB regularly monitors the macroprudential policy actions of EU member states and summarizes them in its database. In our analysis we use the 2015 July version of the database of ESRB, (*European Systemic Risk Board 2015*) (*European Systemic Risk Board 2015*)which contains the data of a total of 25 countries.[10]

Considering the distribution of the legal basis of the macroprudential measures[11] registered by ESRB, the majority of the actions are based on EU legislation. Although certain European states implemented measures prior to the development of the EU-level prudential regulatory framework that were designed to control the risks

[10] We have collected the relevant information about countries not included in the summary issued by ESRB (countries that have not yet sent notification: Austria, Greece, Portugal, Spain, Iceland and as a country outside the EEA, Switzerland) from the web sites of the relevant central banks. The database was supplemented in the case of Hungary as well.

[11] Since the sources of the table are individual notifications, it may contain items that are less relevant for the macroprudential activity of the countries (such as the notification of the quarterly maintenance of the buffer rate, the introduction of reciprocity or other steps of technical nature), therefore it is essential that the data should be cleansed for comparability. After the cleansing of the raw database, we perform the comparative analysis utilizing almost 90 national macroprudential measures of a total of 25 countries. The final sample that we have analyzed contains the tools that are already applied by the individual countries, active or applied but not yet active.

that jeopardize the stability of the entire financial system, macroprudential policy activity has become dynamic since 2014, when the CRR/CRD entered into force.

If we rely on the number of implemented macroprudential actions, it can be seen that the activity of the "old" member states of the European Union is lower compared to the countries that joined after 2004: in total the new member states have implemented 40% more actions than the old ones. The difference can be mainly explained by the different risk levels of the new accession countries and the phases of the financial and real economic cycle that is different by region.

According to the sample available for us, based on almost 70 sets of regulation, the additional capital requirement has been imposed the most frequently in Europe, in that regard, in the category of West-European countries Denmark, the Netherlands and the United Kingdom are outstandingly active, and in the category of new accession countries the Czech Republic and Croatia. All over Europe, the various actions aimed at controlling the excessive credit growth constitute over one-third of the entire sample, and within that the implementation of loan-to-value limits is the most frequent, at present 10 countries apply a tool of this type. Tools aimed at long-term liquidity risks are less common in Europe, while several countries apply short-term liquidity rates.

Table 2 provides an overview of the macroprudential practices of the individual countries. The darker cells indicate the tools already in effect, while the lighter cells show the tools already communicated but not yet in effect. As a primary source we used the ESRB database filtered by the notifications containing actual measures, in addition, in the compilation, in the case of the missing data the web sites of the individual central banks were of assistance. In case of short-term liquidity regulating measures, the EBA's database of national measures was also taken into account. From the perspective of macroprudential policy, totally inactive countries (Greece, Portugal, Spain) were not taken into account in the comparative table. Regarding the capital conservation and the CCB puffers, it should be noted that they will be activated for every country from 2016, so there will not be any great discrepancy in their activity in this regard. The calibration work of these capital buffers has also begun in Hungary.

Table 2
Macroprudential measures in EEA countries

	HU	BG	CZ	PL	RO	SK	CY	EE	HR	LT	LV	MT	SI	AT	BE	DE	DK	FI	FR	IE	IT	LU	NL	SE	UK	CH	IS	NO
Within the CRDIV/CRR																												
Tőke																												
Capital conservation buffer	▣	■	■			■		■	■		■							■										■
Systemic risk buffer	▣	■	■			▣		■	■								■											■
Countercyclical capital buffer			■			■			■		▣						■	■						▣	■	■		▣
Identification of global systematically important institutions and introduction of their additional buffer																■			■		■		■		■			
Identification of other systematically important institutions and introduction of their additional buffer	▣																						■					▣
Tightening of risk weights					■				■						■					■		■			■			■
Liquidity																												
Tightening of liquidity coverage regulation (LCR)	▣																						▣	■	▣			
Within national competence																												
Debt cap																												
Loan-to-value requirements (LTV)	■		■	■		■	■		■	■							▣	▣		■			■	■				
Restriction on loan maturity	■			■			■		■																			
Payment to income type debt capes (LTI, PTI, DTI, DSTI)	■					■	■		■											■								
Regulation of loan amortisation																	▣						■					
Debt cap rules differenciated by currency	■			■	■																							
Liquidity																												
Regulation of on-balance sheet currency mismatches	▣																											
Tools for currency and maturity mismatches (long-term liquidity)	■																										■	
Short-term liquidity requirements	■	■		■	■				■		■	■	■	■		■	■		■	■		■	■		■			
Other long-term liquidity requirements (maturity mismatches)	▣																											
Number of measures	**12**	**3**	**3**	**3**	**5**	**4**	**2**	**5**	**5**	**3**	**4**	**1**	**1**	**1**	**1**	**2**	**5**	**3**	**2**	**4**	**2**	**3**	**7**	**5**	**5**	**1**	**1**	**5**

Source: ESRB (2015a)
Note: Greece, Portugal and Spain were not included in the table due to a lack of measures.

3.2.1. Macroprudential tools provided under the CRDIV and the CRR

The use of macroprudential tools on the basis of harmonised EU legislation tends to be more characteristic of old member states. The activity of Scandinavian countries is salient if we look at the macroprudential tools of Western European countries. Risks arising from excessive credit growth and leverage characterised the region, so many measures that aim to mitigate these risks have recently been adopted. Sweden, for instance, is one of the few member states that took the opportunity to define a countercyclical capital buffer even prior to the mandatory deadline set by the European Union, and was the only country within the EU to apply a CCB ratio of over 0%, applicable to Swedish banks from 1 July 2015, representing an additional capital requirement of 1% of their risk-weighted exposure over and above the minimum capital requirement.

Among Benelux states, conducting a less active macroprudential policy by European standards, the Dutch example deserves a mention. For the Netherlands — due to the structure of its banking system —, it is essential to place great emphasis on addressing the structural dimension of systemic risks, therefore it was among the first signatories of the O-SII buffer, the extra capital requirement that may be prescribed for systemically important financial institutions. Banks qualified as important are also required to hold another additional buffer to offset negative incentives due to the decision on the systemic risk capital requirement adopted in 2014. However, as the SRB is not only prescribed for domestic exposure, only the highest of the two capital buffers needs to be applied.

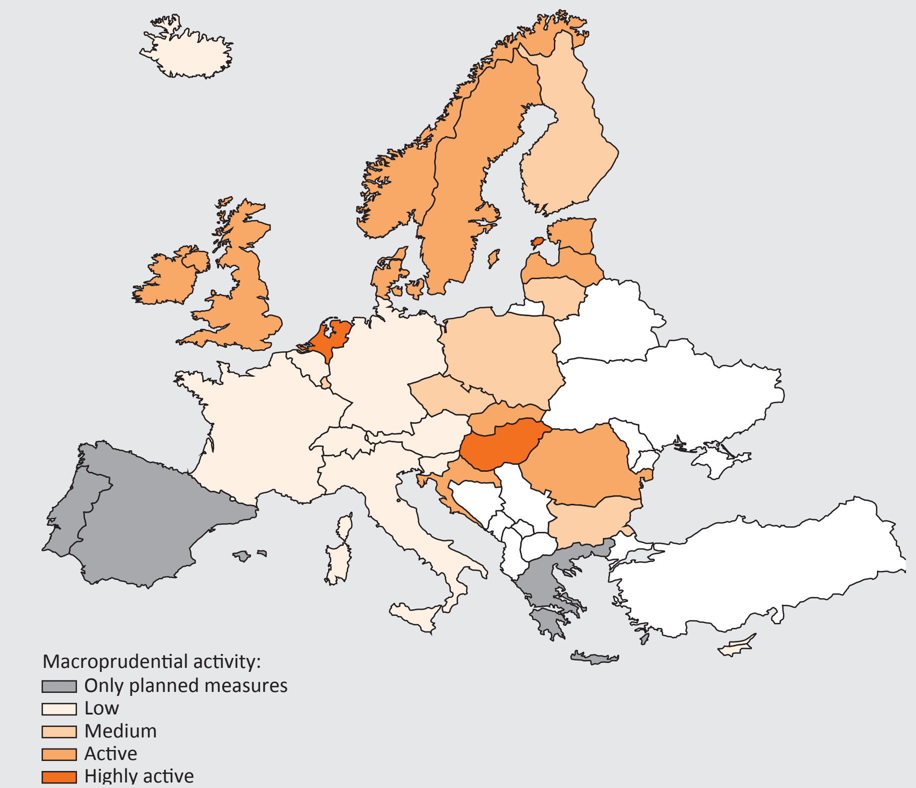
Hungary will apply the tools setting additional capital requirement to be introduced under the European regulatory framework mainly according to the scheduling defined in the CRDIV/CRR. The capital conservation capital buffer, the countercyclical capital buffer will be introduced in 2016, and the necessary calibration work is currently underway. In terms of liquidity coverage requirements (LCR), Hungary is among the first countries which increase the minimum requirement (from 2016 April to 100%), and the systemic risk capital buffer (SRB) will be set in order to treat the risks stemming from problem project loans.

3.2.2. Macroprudential tools based on national legislation

The application of tools within national competence is characteristic of the Central and Eastern European region, where mainly debt brake the rules have been widely adopted. This trend is not new: the most advanced economies had already exhibited lower activity in the use of such tools in the pre-crisis era than developing countries, including those within the region. (*Dumici 2014*) As a result of the crisis, debt brake rules and liquidity standards have also spread outside the Central and Eastern European region, within the Scandinavian region and the Netherlands. In these countries, the main measures adopted include the loan coverage limits, the regulation of loan amortisation and the application of short-term liquidity standards. The lessons of the financial crisis therefore pushed every country towards a higher level of regulatory activity, but the Eastern region remains more active in terms of tools applied in the context of national competence compared to Western countries.

Hungary has actively applied macroprudential regulatory tools available within its national scope of competence. The introduction of borrowing limits is widespread within the region, but only Hungary limits the repayment instalment amount in respect of income among Visegrad countries (as Poland has revoked the rule). However, Hungarian regulatory practice is most salient in terms of its long-term liquidity standards With the exception of the liquidity coverage ratio, long-term liquidity standards have not yet been finalised within the European legislative environment, and the application within national competence of tools regulating currency mismatch also remain uncharacteristic within the region for the time being. Hungary is therefore exceptional within the region given its liquidity rules

Figure 2.
The macroprudential policy activity of EEA member states



Source: Own analysis based on the ESRB (2015a) offsetting the provisional absence of the international regulatory environment: ensuring the an adequate degree of long-term foreign currency liquidity using the foreign exchange funding adequacy ratio (FFAR), prescribing a limit on currency mismatch using the foreign exchange coverage ratio (FECR), and managing mismatch risks measured in domestic currency using the mortgage credit funding adequacy ratio (MCFAR) qualify as individual macroprudential measures.

4. The regulatory activity of individual countries relative to developments in risks

So far, relatively few comprehensive studies have compared prudential rules on an international level, due partly to the novel nature of the topic and partly to difficult access to cross-sectional data. The majority of authors use the IMF's GMPI (Global Macroprudential Policy Instruments) database as their point of reference, which contains information furnished by the authorities of respondent countries. In a European context, the EBA and the ESRB database, the latter with a narrower focus, are currently available and represent an adequate starting point. These databases, based on notifications provided by member states, are currently reaching a level of substantive saturation that enables new experiences to be drawn. As the analyses published so far *(*see *ESRB (2015b), EBA (2015b))* only examine the regulatory conduct of EU member states in and of themselves, albeit from various aspects, this chapter introduces a new dimension to rate prudential practice, namely, countries' risk profile. We evaluated bank regulation activity relative to countries' risk profile based on the following:

As a first step, we quantified the intensity of prudential regulation by creating a summary indicator based on the abovespecified tightening of microprudential measures (as these represent the regulatory response to risks) and the number of macroprudential measures. We then created regulatory categories on a scale from 1 to 4 in function of the number of tightening interventions, where 1 represents the strictest and 4 represents the least strict regulatory activity. (See the annex for the classification of countries.) It is important to mention that this only defines regulatory activity on the basis of quantity, and regards the importance of all regulatory tools as being equally important. Based on practical experience, the number of measures broadly provides a good basis for comparison, and assigning weightings according to the importance of specific regulatory tools or other aspects would lend unnecessary complexity to the methodology. It should furthermore be mentioned that the sources forming the basis of our classification only include prudential tools in the narrower sense.

As a second step, we defined the level of risks following the methodology of the ESRB's risk map (*ESRB 2015c*), creating a composite indicator for every country. When selecting individual indicators, we strived to cover the four different macroprudential objectives defined by the ESRB (and the market failures they address), while also incorporating the indicator representing macroeconomic risks. We used the statistics of the European Central Bank (*ECB 2015*) and the International Monetary Fund (*IMF 2015*) as our sources, using the year-end averages for 2012–2014 data for the risk indicators.

We used the following indicators for compiling aggregate risk indicators: *(i)* ratio of non-performing loans within the total loan portfolio, *(ii)* ratio of foreign currency loans within the household and corporate loan portfolio, *(iii)* lending growth rate among non-financial corporations, *(iv)* household debt ratio (as a percentage of gross disposable income), *(v)* the loan-to-deposit ratio, *(vi)* the country's external financial vulnerability.

The individual risks thus obtained were grouped into four categories in an analogue manner by classifying regulatory activity, with 1 being the highest and 4 being the lowest level of risk. The average of these risk indicators was used to determine the composite indicator, which also categorises countries in the abovepsecified manner based on their aggregate risks using a rating of 1 to 4. We attributed greater importance to the adequate management of significant risks, and therefore countries representing at least three significant risks (with a rating of 1) were automatically grouped into aggregate risk category 1. (See the annex for the comparative table specifying the risk profile of countries.)

For our analytical framework, we distinguished four country groups, classifying countries based on two dimensions. In both cases, we regarded countries in category 1 and 2 as having "high" activity, while those in category 3 and 4 as having "moderate" risk or activity. Concerning the grouping it is important to note, that the borderlines between the different groups are not sharp, furthermore the content of them may change dinamically. For example Hungary would be classified as a „Proactive" country today, as the majority of the risks have been treated to date, but for the classification the level of risk for the previous three years were used. Accordingly the assessment should be rather seen as a snapshot.

Table 3.
Regulatory activity and developments in risk levels in EU countries

		Regulatory activity			
		High		**Moderate**	
Risk levels	**High**	Hungary Bulgaria Croatia Romania	Denmark Ireland	Greece Italy Portugal	Spain Cyprus Austria
	Moderate	Slovakia Latvia Estonia	Sweden Netherlands United Kingdom	Czech Republic Germany Poland Lithuania Slovenia	Malta France Finland Luxemburg Belgium

Source: Own analysis based on ESRB (2015a), EBA (2015a), ECB (2015) and IMF (2015)

Significant differences emerge in terms of relative activity among the countries examined based on this methodology:

i. *"Active" countries:* The first group includes countries where the stability of the financial system is threatened by significant risks and regulators exhibit active regulatory conduct to address these risks. This group includes Central and Eastern European countries most burdened by foreign currency lending and actively addressing the resultant risks, as well as Denmark and Ireland. Higher activity on average within the Central and Eastern European region emerged primarily as a result of diverging risk profiles compared to Western countries. The economic optimist prevailing within the region before the crisis, the ample liquidity and the search for yield stemming from the low international interest environment naturally pushed investors towards new EU member states, producing what appeared to be stable economic growth while offering higher yields. The inflowing capital (often in the form of parent bank funding) contributed to economic growth through higher lending, but also gave rise to numerous risks. (*Dumicic 2014*) Excessive flow of credit (which typically affected mortgage loans within the region) and unbridled risk-taking led to the emergence of systemic risks: it pushed up property prices, triggered an asset price bubble and eroded the quality of loans (*Lim et al. 2011*).

   The spread of foreign currency lending, uncovered by any foreign currency income in case of most consumers, gave rise to significant risk within the region (*OENB 2010*). These loans further fuelled the otherwise already rapid flow of credit and in case of an exchange rate shock exacerbated the deterioration in portfolio quality. Numerous debt brake regulations have been introduced within the region to manage and prevent the systemic default that has persisted since the crisis and the excessive indebtedness risks.

ii. *"Passive" countries* Members of this group also face systemic risks, but their regulatory activity falls short of the level necessary to adequately manage them. The group is characterised by its inclusion of Mediterranean countries burdened by substantial economic woes: Greece, Italy, Spain and Portugal. Alongside the widely known macroeconomic issues, the system of financial intermediation of these countries is also burdened by numerous risks. All of them faced excessive flow of credit in the corporate segment and household indebtedness also took on excessive proportions. As a result, the share of non-performing loans was far above 10% on average (*ECB 2015*) in these countries, similarly to the Central and Eastern European region. The vulnerability of the system of financial intermediation was further exacerbated by the significant degree of short-term external debt. In spite of these risks, these countries have not yet adopted substantive regulatory risk management measures to shore up financial stability. *Houben–Kakes* (*2013*) emphasise that the introduction of adequate macroprudential tools (e.g. the additional capital requirements to absorb subsequent losses in Italy, Portugal and Spain, and the debt brake rules to prevent a property asset price bubble in Spain) could have contributed both to countering the emergence of risks and minimising subsequent risks within this group.

iii. *"Proactive" countries:* Many of the less risky countries attempt to prevent the subsequent emergence of risks through a preventive and proactive approach: these include Latvia and Estonia among the Baltic states, and Sweden, the Netherlands and the United Kingdom among Western European countries. Although these countries are by no means risk-free, they do not exhibit the persistently high volume of non-performing loans typical of the Central and Eastern European region or the macroeconomic vulnerability of Mediterranean countries.

The two Baltic states faced significant risks arising from foreign currency lending, but exchange rate risk run by consumers disappeared once they joined the euro area. The most significant risk for this group was the flow of (mainly household) credit. To address these risks, debt brake rules were generally introduced in these countries, duly managing these risks (*ECB 2014*). In addition, mainly short-term liquidity requirements were defined in an effort to prevent liquidity risks.

iv. *"Wait-and-see" countries:* Countries exhibiting lower levels of risks include ones that are focusing less on preventive measures for the time being. Among Central and Eastern European countries, the Czech Republic and Poland fall within this group, as well as Germany and France among key Western European countries.

Similarly to the previous group, risk is not fully absent, but the level of risks is lower. In case of the Western European countries in this group, excessive indebtedness and the external vulnerability of the financial system are sources of risk, but are currently at a manageable level. The Central and Eastern

European countries within this group also face an issue of excessive foreign currency lending, but developments in household income, the denomination of foreign currency loans and bank interest rate spread practices did not lead to the emergence of risks similar to those plaguing Hungary. Poland, where the CHF loan portfolio affects 500,000 consumers, is a good illustration of this: the income growth of households and the covariance of bank interest rates with the CHF LIBOR interest rate have significantly mitigated the systemic risk arising from foreign currency loan lending (*NBP 2015*). As a result, the conversion act adopted by the Polish parliament only allows the conversion of household foreign currency loans under specific conditions, reserved for those most in need.

Despite the establishment of authorities with a macroprudential mandate, specific risk management measures still remain to be taken in most countries of this group. For national regulatory authorities, this also means that quicker and more pronounced intervention may be needed should potential risks arise in the future than in a scenario where adequate preparation and preventive measures would have been taken.

5. Conclusion

When rethinking the EU's prudential rules, adopting the form of a regulation was conducive to complete unification, however the CRDIV, as a directive, allows leeway for national derogations, and the options and national discretions provide additional freedom for member states. The objective of these national derogations is to provide fine-tuning adapted to national markets and institutional idiosyncrasies within a unified European framework.

The opportunity for regulatory decisions adopted within national competence is provided both on the microprudential and the macroprudential side, and they are often used by member states. However, the opportunity for differentiation provided by the macroprudential toolset is more significant, as a member states or national authorities may define a very large-scale additional requirements for the entire market, currently geared towards tightening (see the spectrum of additional capital requirements applied).

The regulatory practice of individual countries compared to their risk profile exhibits significant differences within the EU, which allows the distinction of clearly differentiated country groups. Severe systemic risks jeopardise financial system stability - mainly in Central and Eastern European countries - and therefore numerous tools have been introduced. By contrast, some member states (such as Greece, Spain, Italy, and Portugal), which also face severe risks, have only intervened slightly into these processes. Relatively lower regulatory intervention also characterises other areas, and a total of ten countries can be identified where moderate activity is explained by low systemic risk, however these will have to take more pronounced action should future risks arise. Finally, several countries (including the United Kingdom, the Netherlands and Sweden) have adopted a rather preventive approach to prevent the build up of potential future risks.

Hungary is among the most active countries in terms of both micro- and macroprudential regulatory measures. This activity materialises in microprudential regulation in both easing and tightening national differences. Due to its nature, domestic macroprudential regulation characteristically consists of the application of stricter measures. It is important to note however that the high number of requirements imposed within national competence and higher activity within the region are mainly linked to the higher number of systemic risks. Despite the significant mitigation of banking system risks through the conversion of household mortgage loans and many other government and central bank measures, the persisting risks (e.g. the volume of problematic project loans) and the new risks emerging in the wake of forint conversion (the sharp rise in the forint's maturity mismatch and the elevated currency mismatch on the balance sheet) call for an active regulatory approach.

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Annex

Table 1
The degree of key risks and the number of regulatory measures introduced within countries of the EU

	HU	CZ	DE	LV	PL	EE	LT	LU	BG	AT	DK	RO	SK	MT	NL	UK	SE	FR	FI	SI	BE	HR	GR	IT	IE	PT	ES	CY
Regulatory measures	1	3	3	2	3	2	4	3	2	4	2	1	2	3	2	2	1	3	3	3	4	1	4	4	1	4	4	4
Risk profile	1	2	3	3	3	3	3	3	1	2	2	1	3	3	3	3	3	3	3	3	3	1	3	3	1	3	3	3
Share of non-performing loans	1	3	4	3	3	4	2	4	1	4	4	1	3	3	4	4	4	4	4	2	4	1	1	1	1	3	3	1
Share of fx loans to total corporate loans	1	1	3	3	1	4	4	2	1	3	2	1	4	4	4	2	3	4	4	4	4	1	3	4	3	4	4	3
Share of fx loans to total household loans	1	4	4	4	1	4	4	4	1	1	3	1	4	4	4	4	4	4	4	3	4	1	3	4	4	4	4	4
Loans to non-financial corporations	3	4	3	2	4	4	1	4	2	3	3	1	4	2	2	2	4	4	4	1	3	3	3	3	1	3	3	3
Debt ratio of households	3	3	2	4	4	3	4	1	4	2	1	4	4	1	1	1	1	2	1	4	2	3	3	3	1	1	1	1
Loan-to-deposit ratio	1	1	4	4	4	3	3	4	1	3	1	4	3	4	2	4	1	4	3	3	4	4	4	3	4	4	4	3
External financial vulnerability	1	4	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	1	3	4	1	4	3	1	4	3	1	3

Source: Own analysis based on ESRB (2015a), EBA (2015a), ECB (2015) and IMF (2015)
Note: We examined the lending of non-financial corporations using the lending growth rate among non-financial corporations. The household debt ratio was measured as a percentage of gross disposable income. External financial vulnerability refers to short-term external debt relative to GDP.

Legend:

Colour code	Regulatory activity	Risks
1	Very active	Very risky
2	Moderate activity	Moderately risky
3	Low activity	Less risky
4	Not active	Not risky