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Allocating macro-prudential powers

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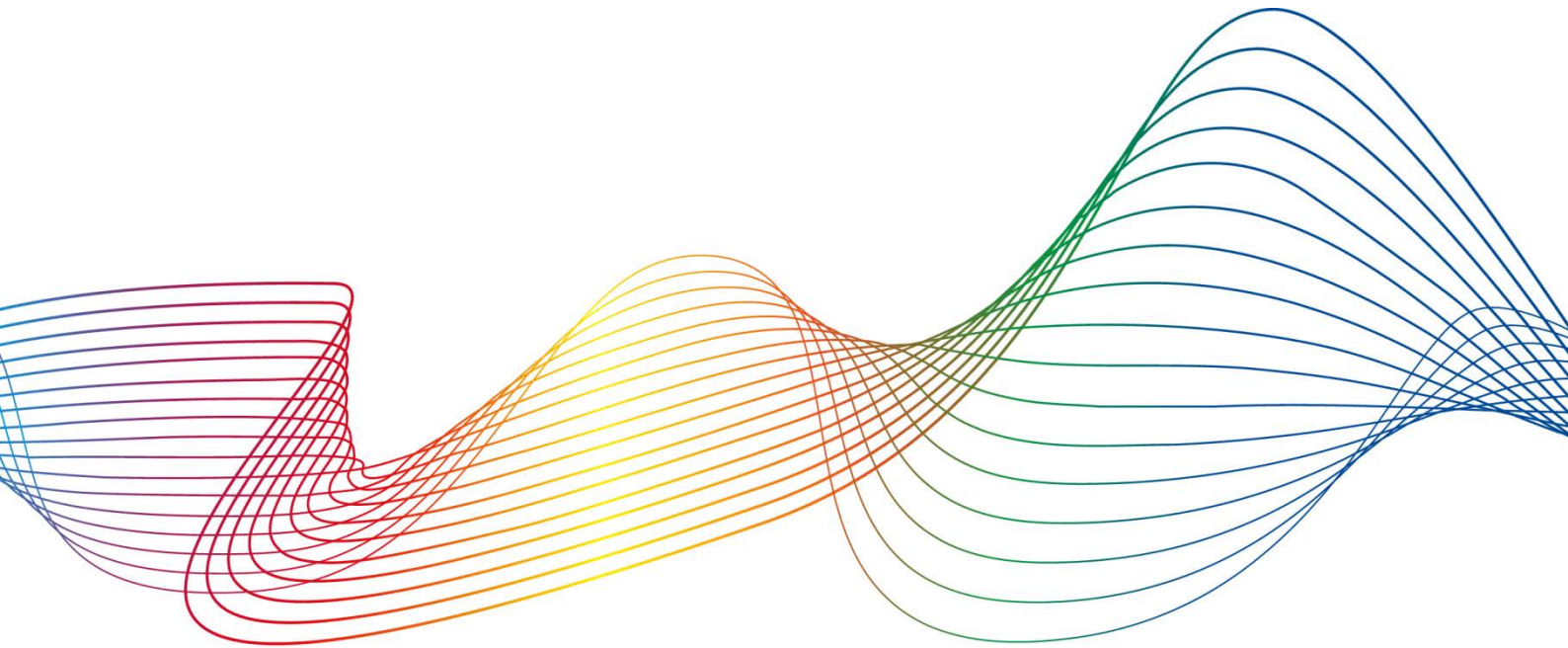
Reports of the Advisory Scientific Committee

No 5/November 2014



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Allocating macro-prudential powers



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Allocating macro-prudential powers

Executive summary

In the wider policy framework for the economic and financial system, monetary, macro-prudential and micro-prudential policies are intimately linked. The macro-prudential authority should be allocated to the body where the overall balance of synergies (between policy objectives) over conflicts and the required expertise are the largest. This report reviews the pros and cons of the four institutional models for the allocation of macro-prudential powers: (1) the government, (2) the central bank, (3) the financial authority and (4) a committee with representatives from these three bodies.

Macro-prudential policy requires complete independence from short-term political pressures to deal with the inherent conflict between the short term and the long term. An independent agency, such as the central bank or a financial authority, may therefore be appropriate for macro-prudential policy. Adequate arrangements for democratic accountability are then important.

There is a link between macro- and micro-prudential policies, as their instruments overlap to a large extent. But the key issue is the expertise and corporate culture of the body that takes the macro-prudential decisions. Macro-prudential policy (just like monetary policy) requires a macroeconomic approach that focuses on the entire financial system, while micro-prudential supervision is more micro-oriented, as it looks at individual institutions. These perspectives can differ significantly. As the stability of the whole financial system is more important than that of its individual components, macro-prudential concerns should generally prevail over micro-prudential concerns, when they conflict. Nevertheless, the micro-prudential concerns should be addressed as well.

Macro-prudential and monetary policies also have synergies and conflicts. Nevertheless, they share the same methodological approach, which is commonly found at central banks. Allocating macro-prudential powers to a central bank is therefore most likely to maximise synergies between policy objectives under most circumstances. To ensure appropriate trade-offs, a central bank may assign responsibility for the two policies to separate departments.

Committee decision-making tends to be more balanced than that of a single institution. But this benefit may not extend to committees comprising bodies with differing objectives. Reputational concerns may induce members to manipulate information and vote strategically. Furthermore, large committees are prone to inaction bias. Finally, when chaired by a government representative, committees can be sensitive to short-term political pressures.

Special considerations apply to the euro area in the presence of the banking union. Macro-prudential policy is even more important in a monetary union with a “one-



size-fits-all” monetary policy. Proactive macro-prudential policies are then needed to address financial imbalances at the country level.

Finally, the ESRB, being responsible for the overall macro-prudential framework in the European Union (EU), has a key role in ensuring a consistent approach across the EU and examining cross-border effects of the use of macro-prudential instruments at the country level.

1. Introduction

In its recommendation of 22 December 2011 on the macro-prudential mandate of national authorities (ESRB/2011/3), the European Systemic Risk Board called on Member States to designate in their national legislation an authority to conduct macro-prudential policy – either a single institution or a board composed of all the institutions whose actions affect financial stability. The ESRB also recommended that this institution or board be given the powers to conduct macro-prudential policy either on its own initiative or following recommendations and warnings by the ESRB. Similarly, the EU Capital Requirements Directive (CRD; Directive 2013/36/EU) requires Member States to set up a “designated authority” for macro-prudential supervision.

All Member States have set up a designated authority to conduct macro-prudential policy. However, not all made the same choice in designating a single institution or a board, and among those that chose a single institution some opted for the central bank while others chose another institution. In addition, the ECB will play a role in macro-prudential policy for the banking union, according to the EU Single Supervisory Mechanism Regulation (Regulation No 1024/2013).

This paper explores the implications of different choices in the allocation of macro-prudential powers from both a positive and a normative viewpoint. Specifically, it addresses the following questions:

- What are the likely effects of alternative allocations of macro-prudential power? In light of these likely effects, to which authority should it be attributed?
- How does this choice affect the interaction between macro-prudential policy and monetary policy?
- How do the answers to these questions differ (i) in countries with monetary sovereignty, (ii) in a monetary union such as the euro area, and (iii) in the EU, which comprises both?

To address these questions, we start by defining the overall policy framework for the financial system. We then analyse interactions between the various policy objectives. Next, we review the existing arrangements for the authorities that have been designated as responsible for macro-prudential policy in the EU. Finally, we discuss the main principles that should guide the allocation of macro-prudential power, and how these principles change depending on the different institutional settings listed above (stand-alone countries, monetary union, EU).

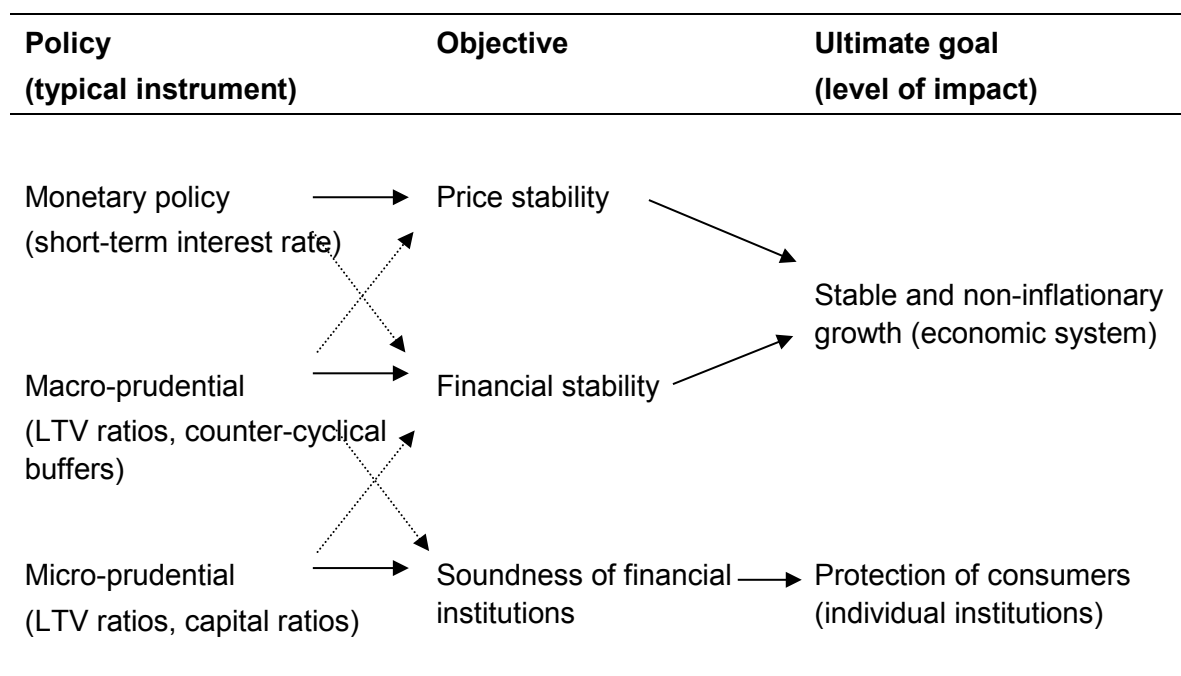
2. Policy framework

The ultimate objective of macro-prudential policy is to safeguard the stability of the financial system as a whole. This includes moderating the build-up of financial

imbalances (i.e. the upswing of the financial cycle) and strengthening the resilience of the financial system, thereby ensuring a sustainable contribution of the financial sector to economic growth. Monetary policy also aims to ensure stable and non-inflationary economic growth. Micro-prudential supervision instead seeks to promote the soundness of financial institutions, thereby protecting banks' depositors or insurance companies' policyholders. Hence, while both macro-prudential and monetary policy are set at the level of the whole economy, micro-prudential supervision operates at the level of individual institutions.

Figure 1 provides an overview of the policy framework for the financial sector and the wider economic system: it outlines the typical assignment of policy instruments to policy objectives, in the tradition of Tinbergen (1952), who argued that at least one independent policy instrument is required for each policy objective. For example, Mundell (1962) applied this general principle to the objectives of internal and external stability, recommending that monetary policy be assigned to the pursuit of external stability (via the determination of the exchange rate) and fiscal policy to that of internal stability (defined as full employment). What makes the problem non-trivial is that both policy tools and objectives are interrelated.

Figure 1. Policy framework for the financial and economic system



Source: Based on Schoenmaker (2013).

Figure 1 illustrates the overall policy framework for the financial and economic system.¹ To keep it simple, each policy has a primary impact on its direct objective and a secondary impact on other objectives primarily affected by another policy. The solid lines in Figure 1 illustrate the primary impact and the dotted lines secondary impacts. A prime example is a change in the interest rate, which impacts primarily price stability and aggregate output, but may also have a secondary impact on financial stability (by triggering swings in asset prices) and the soundness of financial firms (by affecting the creditworthiness of borrowers and the value of the securities held by banks and insurance companies).

These policies are often, but not invariably, assigned to different agencies. In several European countries, the central bank is in charge of both monetary policy and micro-prudential supervision (often labelled as financial supervision). These broad central banks increasingly adopt an organisational structure with a separate body in charge of supervision. A case in point is the Single Supervisory Mechanism (SSM) in the euro area: the EU legislator has created a Supervisory Board for day-to-day supervision of euro area banks. Ultimately, however, supervisory decisions are taken by the ECB Governing Council, which also takes monetary policy decisions for the euro-area.

The most policy-relevant question addressed in this report is how macro-prudential authority should be allocated in this framework, i.e. to which authority the corresponding powers should be given.

3. Policy interactions

The interactions between policy areas raise several issues in the choice of policy instruments as well as in determining interactions between the agencies. It is important to take into account the impact of one area's instrument not only on that area's own objective, but also on the objectives of the other areas. Being aware of such cross-effects may lead to a choice and use of instrument that is less damaging to other areas, and thus to better overall results.

But it may not always be possible to avoid conflicts between objectives. Although the agencies have their own mandate (and are thus independent), there may be a need for policy coordination, with at least information exchange and sometimes consultation (while respecting their respective mandates). In particular for financial stability, some countries have set up a committee with representatives from all three branches (government, central bank, supervision) to ensure adequate coordination.

¹ This report does not examine fiscal policy, which may also have an impact on financial stability, as fiscal policy is primarily aimed at resource allocation and income redistribution. Moreover, this report only deals with the micro-prudential aspect of supervision and does not discuss conduct of business policies.

Committee decision-making tends to be more balanced than decision-making by individuals. This is typically true of committees acting as a body of a single institution (e.g. the executive board of a company or the monetary policy committee of a central bank) or a single system of related institutions (e.g. the Board of the Federal Reserve System). But the benefits of committee decision-making need not directly extend to committees representing more or less independent institutions with differing objectives which are supposed to work together. Visser and Swank (2007) show that reputational concerns induce members to manipulate information and vote strategically if their preferences differ considerably. Moreover, large committees are prone to “groupthink”, which plays an important role in the formation of financial bubbles: see, for example, relevant accounts in the seminal book by Reinhart and Rogoff (2009) as well as the theoretical analysis by Benabou (2013).

Hence, giving the macro-prudential policy mandate to a single body creates ‘ownership’ and is likely to foster more efficient and timely decision-making than entrusting it to an ad hoc board composed of all the institutions whose actions may affect financial stability. Assigning macro-prudential powers to a single body is, nevertheless, consistent with fostering adequate coordination between this body and other agencies via a financial stability committee. Such a coordination committee can play an important role in aligning the actions of the various agencies. Otherwise, one agency may offset the actions of another agency, which would render macro-prudential policy ineffective.

In a world with synergies and conflicts between policy objectives, the macro-prudential authority should be allocated to the body where the overall balance of synergies over conflicts and the required expertise to pursue the systemic stability objective are the largest.

Monetary and macro-prudential policy

There is synergy between the price stability and the financial stability mandates. In principle, the goals of monetary and macro-prudential policy should never conflict: without financial stability it is difficult to maintain the economy on a stable and non-inflationary growth path, and without price and output growth stability it might be difficult to maintain financial stability.

In practice, there can also be conflicts in the short term. For example, during a period of high unemployment and low inflation, the central bank might want to stimulate demand with low interest rates. One channel through which lower interest rates stimulate aggregate demand is via their impact on asset prices, for example house prices. Higher house prices could induce families to increase consumption by extracting the equity in their homes or to engage in building activity. But from a macro-prudential point of view this might not be desirable because, as soon as interest rates rise again, they could lead to a drop in house prices and thus endanger financial stability by pushing many borrowers into financial distress (as the value of their mortgages drops below that of their houses). However, if the macro-prudential authority intervenes by reducing loan-to-value (LTV) ratios, the impact of

monetary policy on aggregate demand will be much reduced, since households will then not be able to extract the equity in their homes.

A similar conflict might arise in the setting of counter-cyclical capital buffers. Increasing them should reduce the availability of credit and thus dampen demand, which in some instances might conflict with the short-term objective of monetary policy. Macro-prudential instruments can be targeted more directly at addressing financial imbalances than monetary policy instruments, as they can tighten or loosen financial conditions in specific markets or segments. Monetary policy-makers will need to consider the effects of macro-prudential instruments on the aggregate transmission mechanism. For instance, if macro-prudential policy addresses tensions in the mortgage lending and housing market via a decrease in the LTV ratio, the central bank may avoid raising interest rates. Ultimately, it is necessary to find a policy mix that addresses the undesirable side effects of macro-prudential policy without compromising monetary policy objectives (ESRB, 2014).

Another conflict may arise in the application of the policies in the context of a monetary union: in the euro area, monetary policy is set at the euro area level and macro-prudential policy at the country level; hence, the effects of a loosening of monetary policy may be largely undone in a specific country that chooses to tighten macro-prudential tools. Again, it is crucial to find an appropriate policy mix.

Micro- and macro-prudential policy

At the instrument level, there are strong synergies between macro- and micro-prudential policies. Several macro-prudential instruments are closely related to micro-prudential tools (ESRB, 2014). Table 1 illustrates that the (macro-prudential) counter-cyclical capital buffer is, for example, part of the larger (micro-prudential) capital adequacy framework, though with a different underlying objective. Moreover, such macro-prudential instruments share the same legal basis, e.g. the EU Capital Requirements Regulation (CRR; No 575/2013) and the EU Capital Requirements Directive (CRD IV; No 2013/36). A similar observation applies to LTV ratios, which are usually set with a consumer protection goal in mind, but can also prove a key instrument to preserve macro-financial stability.

On the other hand, macro- and micro-prudential supervision have different underlying objectives. The authority responsible for macro-prudential supervision decides at the macro level (e.g. the size of the counter-cyclical capital buffer), while the implementation may subsequently be done by the micro-prudential supervisor if that is more efficient (e.g. implementing the overall capital adequacy framework). Finally, some macro-prudential tools may apply to entities outside of the remit of the micro-prudential supervisor. LTV ratios should, for example, apply to all financial institutions – not just banks – which provide mortgages to households. The scope may thus go beyond the regulated entities of banks, insurers and pension funds.

Until recently, the prevalent approach to financial stability implicitly assumed that the system as a whole can be made safe by making individual financial institutions safe.

But now it is widely agreed that this idea, which was at the basis of original Basel banking supervision, represents a fallacy of composition. The fallacy of composition (Brunnermeier et al., 2009) derives from the fact that, when trying to make themselves safer, financial institutions can behave in a way that collectively undermines the stability of the system. Selling an asset when the price of risk increases may be a prudent response from the perspective of an individual bank, but if many banks act in this way, the asset price will collapse, forcing financial institutions to take yet further steps to rectify the situation. The responses of the banks themselves to such pressures lead to generalised declines in asset prices, and enhanced correlations and volatility in asset markets (Shleifer and Vishny, 2011). Insofar as they neglect these general equilibrium effects, micro-prudential policies can be destructive at the macroeconomic level.

Macro- and micro-prudential policies have distinct objectives and therefore distinct perspectives (Borio, 2003). Table 1 summarises their differing perspectives, which are intentionally stylised. They are intended to highlight two orientations that inevitably *coexist* in current prudential frameworks.

Table 1. The macro- and micro-prudential perspectives contrasted

	Macro-prudential	Micro-prudential
Policy objective	Limit financial system-wide distress	Limit distress of individual financial institutions
Ultimate goal	Avoid output (GDP) costs due to financial instability	Protect consumers of financial services (depositors, investors, policyholders)
Characterisation of financial asset risks	Dependent on collective behaviour; endogenous	Independent of individual agents' behaviour; exogenous
Correlations and common exposures across financial institutions	Important	Irrelevant
Calibration of prudential controls	In terms of system-wide risk; top-down	In terms of individual institutions' risk; bottom-up

Source: Borio (2003).

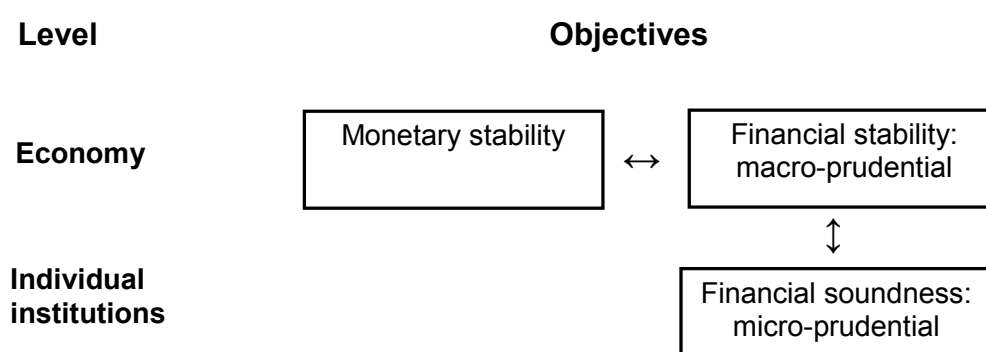
Table 1 provides a general overview, but practices can be more nuanced. While supervisors tend to deal with financial institutions one-by-one, correlations are important for micro-prudential supervision, as they could affect the way in which micro-level problems should be addressed. When there is no correlation across institutions, the supervisor can, for example, prompt other financial institutions to

take over a failed institution; but strong correlation can impair such a solution. In this respect, micro-prudential supervisors could benefit from having full access to macro-prudential risk analysis, both for the regular supervisory review and evaluation programme (SREP) and concrete supervisory decisions.

In principle, some conflicts of objective could be internalised within authorities' decision-making processes. For example, micro-prudential decision-makers could take account of the macro-prudential impact of their policies, especially when taking significant supervisory decisions at a large scale. However, it may not always be possible to avoid conflicts between objectives. The objectives in the first two rows of Figure 1, price and financial stability, are equally important and affect the economy at large. The last objective, sound financial institutions, concerns individual financial institutions and aims to protect individual consumers. The first two objectives aimed at the “system” are more important than the latter objective aimed at “individuals”, for the simple reason that when the system collapses its individual components will collapse as well. Conversely, the stability of the financial system can be maintained even if some of its individual components collapse: indeed, in a market economy, insolvent firms – including financial firms – should be allowed to fail in order to contain moral hazard, unless there is a systemic threat.

When objectives conflict, it may be appropriate to define a hierarchy between them (Schoenmaker and Kremers, 2014). In such situations, the macro concerns should override the micro concerns. Figure 2 depicts the proposed hierarchy of objectives. The override should be reversible to prevent forbearance. When a large unexpected stock market drop occurs, for example, capital adequacy rules may be temporarily lifted to avoid fire sales. But there must be a clear exit strategy. Otherwise problems may scale up and become worse. Moreover, the supervisor could take alternative micro measures which are less damaging at the macro level.

Figure 2. Hierarchy of objectives



Source: Schoenmaker and Kremers (2014).

4. Emerging arrangements in the European Union

The ESRB has recommended (ESRB/2011/3) that Member States designate an authority to be responsible for the conduct of macro-prudential policy. Furthermore,

the CRD required EU Member States to set up a “designated authority” for macro-prudential supervision.² The ESRB has completed a review of the (likely) designated authorities.³ From this review, we distil four main institutional models where the formal powers for macro-prudential supervision are located:

1. the ministry of finance (or economics);
2. the central bank;
3. the financial authority; and
4. an ad hoc committee.

Table 2 shows that the central bank is most often the authority designated for the macro-prudential powers enshrined in the CRD IV/CRR (see Table 3 in the Annex for a breakdown at country level). While several European central banks combine monetary policy and supervisory tasks, they typically have separate departments for financial stability (macro-prudential) and financial supervision (micro-prudential). In some countries, the financial authority is the designated authority.

Table 2. Institutional models for designated authorities responsible for macro-prudential policy (in numbers and %)

Model	1	2	3	4
Agency	Ministry of finance	Central bank	Financial authority	Committee
Euro area	0 (0%)	13 (68%)	5 (26%)	1 (5%)
Non-euro area	1 (9%)	7 (64%)	2 (18%)	1 (9%)
Total	1 (3%)	20 (67%)	7 (23%)	2 (7%)

Note: The table covers the 28 EU Member States and the banking union.

Source: Annex 2 of the ESRB response to the call for advice by the European Commission on macro-prudential rules in the CRD/CRR (April 2014).

There is only one case (Denmark) where the Ministry is directly in charge. The Danish Financial Supervisory Authority is also an agency of the Danish government, as is the case in some other EU countries.

² In principle, the macro-prudential authority established to comply with the ESRB recommendation could differ from the institution designated for the macro-prudential powers enshrined in the CRD IV/CRR. Co-ordination problems could arise when the two institutions are different. This paper focuses on the institution designated for the macro-prudential powers enshrined in the CRD IV/CRR.

³ See the ESRB’s Instruments Working Group (IWG) Working Paper WP/2013/011.

In reality, however, in a significant number of cases the designated authority cannot decide on its own on the use of the main tools foreseen in the CRR and CRD. This is particularly true of the United Kingdom, where the central bank has been designated officially as being in charge, but the key decisions on macro-prudential instruments are taken by the Financial Policy Committee (FPC), which is part of the central bank, though half of its members are not from the central bank. In these cases, the direct responsibility rests with the designated authority (in this case, the central bank), with inputs from independent experts and other authorities.

The Single Supervisory Mechanism makes the ECB an additional player for the countries that participate in the banking union (Advisory Scientific Committee, 2013). While the national designated authorities have the power to apply the macro-prudential tools, according to Article 5 (1) of the SSM Regulation, the ECB has the power to set tighter requirements than national authorities, according to Article 5 (2). The ECB may also set macro-prudential buffer rates in the first instance, thus emphasising the ECB's authority to act as an initiator of macro-prudential measures (see Article 102 of the SSM Framework Regulation). The ECB has established a Financial Stability Committee (FSC) to co-ordinate actions by national authorities and the ECB. The FSC will advise the Supervisory Board and the Governing Council on the appropriate macro-prudential stance.

Finally, in a few cases, a committee acts as the designated authority. In these cases, the committee has direct responsibility for the application of macro-prudential instruments.

5. Allocation of macro-prudential powers

The allocation of macro-prudential policy to any of the existing agencies (government, central bank or financial authority)⁴ involves several trade-offs, as pointed out in Section 3. This section highlights the main considerations.

Government

Macro-prudential policy has an impact on financial stability in the medium to long term, just like monetary policy on price stability. There is almost always a conflict between the long term and short term, with politics being driven by short-term electoral concerns. Due to this time inconsistency, monetary policy has been separated from the government (Kydland and Prescott, 1977; Barro and Gordon, 1983). The same time-inconsistency arguments are valid for macro-prudential policy. There is thus a danger of inherent "inaction bias", as the costs of tightening are immediately visible, while the future benefits are less obvious. Governments are liable to block necessary decisions which have unpleasant short-term

⁴ In Section 3, we explain why a separate committee might not work.

consequences. By contrast, independent central banks are generally in a stronger position to take long-term time-consistent decisions.

At the same time, macro-prudential policy has a large impact on the economy. Lowering LTV ratios for mortgages makes it more difficult to acquire a new house (first-time buyers are affected) and may have a negative impact on house prices (home-owners are affected). In a democracy, governments typically take such distributional decisions under parliamentary scrutiny. Appropriate arrangements for the democratic accountability of a non-governmental macro-prudential agency are therefore important, particularly if macro-prudential powers are assigned to a central bank which also has micro-prudential powers (De Haan and Eiffinger, 2000).

Central bank

Monetary policy and macro-prudential policy both have an impact on the financial system and the wider economy. They thus require a “macro” approach which evaluates the macro-financial system as a whole.⁵ As the ultimate objective – price versus financial stability – is different, however, the appropriate policy stance may also differ. Separate departments of the central bank should therefore be involved.

Nevertheless, there is a strong need for coordination between monetary and macro-prudential policy (see Box 1). In order to achieve consumer price stability, monetary policy must take account of financial conditions. It may, for example, be useful to lean against the wind to prevent asset price bubbles. After the monetary policy decisions are taken, the financial stability wing can assess whether further tightening via macro-prudential instruments is necessary. Furthermore, the nature of decision-making in macro-prudential and monetary policy is different: interest rates are frequently adjusted, whereas a macro-prudential authority will only sporadically use its powers to change LTVs or counter-cyclical capital buffers.

As illustrated above, there can be conflicts of interest. For example, a need to loosen on the monetary side to stimulate the economy may coexist with a need to tighten on the financial side to prevent the build-up of financial imbalances. In this case, each side should use its own instruments with appropriate coordination to avoid sending conflicting signals to the market.

Financial authority

Entrusting macro-prudential powers to a financial supervisory authority may be problematic (see Box 1). While there is a strong synergy at the instrument level, the

⁵ Macro-finance, which aims to incorporate the financial sector in macroeconomic models, is emerging as a new discipline in the academic literature (see, for example, Brunnermeier and Sannikov, 2014).

perspectives of macro- and micro-prudential supervision are very different. The fallacy of composition further suggests that the impact of policies at the level of the financial system can differ from that on the individual financial institutions. As the stability of the system is more important than that of its components, macro-prudential concerns should generally prevail over micro-prudential concerns.

Next, the methodological approach is also different. Macro-prudential policy uses the tools of macroeconomics and finance, while financial supervision is relatively more based on accountancy (e.g. checking balance sheets) and legally driven. While a small macro-prudential unit could be incorporated within a large financial authority, its effectiveness is not guaranteed as the corporate culture of the agency depends much on the presence and identity of its dominant group(s). Central banks tend to adopt a more macro-oriented perspective, while separate financial authorities adopt a more micro-oriented approach (Goodhart et al., 2002).

Finally, financial authorities may be under the indirect or direct control of the government (finance ministry) for policy-making. That may introduce political pressures for or against a particular policy stance, and hamper the effectiveness and timely activation of macro-prudential tools. As discussed above, macro-prudential authorities should be independent from government.

Box 1: Power vacuums and the macro-prudential policy stance in Sweden

Sweden provides a case study of how the absence of a formal allocation of macro-prudential powers affects the overall policy stance.

Since the beginning of 2014, Sweden has belonged to the minority of EU countries in which macro-prudential powers have been allocated to the micro-prudential supervisor – the Finansinspektionen. But before 2014, Sweden had a macro-prudential power vacuum: no institution had formal authority for macro-prudential supervision.

Against this institutional backdrop, the Riksbank raised its main policy (repo) rate from 0.25% in June 2010 to 2% in July 2011. The main reason for the increase was a forecast of upward pressure on inflation owing to strong economic growth, but the rate increases were also intended to put downward pressure on house prices and household debt, which were seen as excessively high. This prevailing financial risk was described by Governor Stefan Ingves as “a reason in itself for raising the repo rate”.⁶

This case study underscores that macro-prudential policy should play a role in the policy mix. If no institution has any macro-prudential power, other policy processes are affected: for example, the central bank may be induced to tighten its monetary

⁶ Minutes of the Riksbank's Executive Board's Monetary Policy Meeting on 30 June 2010.

stance also to improve financial stability, so that monetary policy ends up partly surrogating the role of macro-prudential policy.

Moreover, Sweden's experience suggests that allocating macro-prudential powers to the central bank is preferable, since monetary policy and macro-prudential policy are closely connected. Optimally coordinating and balancing monetary and macro-prudential policies is easier if powers lie within a single institution. Monetary policy must take account of financial conditions, which affect how monetary impulses transmit to the real economy. Likewise, macro-prudential policy must respond to monetary policy, since financial risks can build up when monetary policy narrowly targets inflation, particularly when natural real rates are low.

If monetary and macro-prudential powers are separated, there is a risk that the overall policy stance becomes inconsistent. For example, after October 2010 the Finansinspektionen imposed a loan-to-value limit of 85% for new mortgages, in order to contain excessive household indebtedness. But the effect of this LTV limit was deemed uncertain by the majority of the Riksbank's Executive Board in December 2010, motivating further tightening of monetary policy at the margin.⁷ In a recent *Financial Times* column, senior Riksbank policymakers stated explicitly that financial regulatory measures had been "weak or insufficient" given the risks, and so monetary policy needed to respond to excessive house prices and household debt.⁸

Concluding considerations

Monetary, micro-prudential and macro-prudential policies are intimately linked. The link is particularly apparent between the latter two, as their instruments overlap to a large extent. In allocating macro-prudential powers, the key issue is the corporate

⁷ Minutes of the Riksbank's Executive Board's Monetary Policy Meeting on 14 December 2010.

⁸ "Monetary policy has had positive results in Sweden", letter to the *Financial Times* from Stefan Ingves and Per Jansson, 23 July 2014.

culture and expertise of the body that takes the decisions. Macro-prudential policy requires a combination of a system-wide perspective with complete independence from short-term political pressures. This combination of attributes is most likely to be found in a central bank.

Macro-prudential policy also requires a different approach from monetary policy. The latter is usually based on models that link macroeconomic variables to prices. But macro-prudential policy is concerned with non-linear, abrupt discontinuities that can endanger financial stability. Again, the key consideration is not so much the institution where the body is housed, but its corporate culture in terms of the variables and mechanisms which are at the centre of attention. Central banks typically have separate departments for monetary and macro-prudential policy. Moreover, further work on the appropriate arrangements for democratic accountability of macro-prudential policy may be warranted.

Next, special considerations apply to the euro area in the presence of the banking union. Macro-prudential policy is even more important in a monetary union with a “one-size-fits-all” monetary policy. Proactive macro-prudential policies are then needed to address financial imbalances at the country level, which may differ significantly. Monetary policy and macro-prudential policy are complementary in a heterogeneous banking union. For instance, an incipient housing bubble in a single country or in a subset of member countries may be addressed by lowering the respective LTV ratios, without requiring a tightening of the monetary policy stance in the entire monetary union.

Finally, the ESRB is responsible for the overall macro-prudential framework in the EU. It has the power to issue warnings and recommendations to be followed up by the relevant macro-prudential authorities. The ESRB has a special role to monitor the consistent application of macro-prudential tools across the EU and to examine cross-border effects of the national application of these tools. The coexistence of three layers of decision-making regarding macro-prudential risk – the ESRB, the ECB’s Governing Council and the national authorities – of course makes for a complex institutional framework. Cooperation between these bodies is essential. In particular, it is very important for the ECB and the ESRB to agree on procedures to ensure information sharing and operational effectiveness.

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Annex

Table 3. Designated authorities for macro-prudential supervision in the EU

Model	1	2	3	4
Agency	Ministry of finance (MF)	Central bank (CB)	Financial Authority (FA)	Committee
Euro area	0	13	5	1
Austria			x	
Belgium		x		
Cyprus		x		
Estonia		x		
Finland			x	
France				x
Germany			x	
Greece		x		
Ireland		x		
Italy		x		
Latvia			x	
Luxembourg			x	
Malta		x		
Netherlands		x		
Portugal		x		
Slovakia		x		
Slovenia		x		
Spain		x		
Central level (SSM)		x		



Non-euro area	1	7	2	1
Bulgaria		x		
Croatia		x		
Czech Republic		x		
Denmark	x			
Hungary		x		
Lithuania		x		
Poland				x
Romania		x	x	
Sweden			x	
United Kingdom		x		
Total	1	20	7	2

Source: Annex 2 of the ESRB response to the call for advice by the European Commission on macro-prudential rules in the CRD/CRR (April 2014).

Note: In principle, the macro-prudential authority established to comply with the ESRB recommendation could differ from the institution designated for the macro-prudential powers enshrined in the CRD IV/CRR. This table focuses on the institution designated for the macro-prudential powers enshrined in the CRD IV/CRR. “SSM” stands for Single Supervision Mechanism. In the case of Romania, there are two designated authorities, the central bank for credit institutions and the financial authority for investment firms.



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