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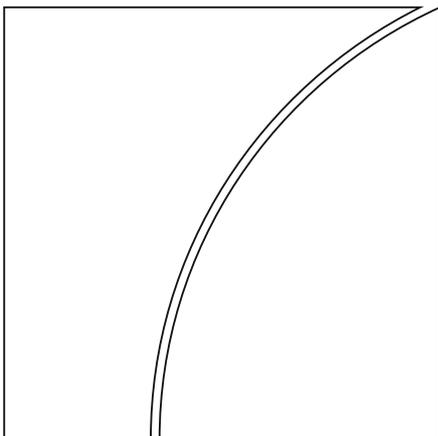
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Objective-setting and communication of macroprudential policies

Report submitted by a Study Group established by
the Committee on the Global Financial System

The Group was chaired by Cecilia Skingsley
(Sveriges Riksbank)

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Preface

Macroprudential policy faces challenges that stem from the difficulty to encapsulate its principal objective, financial stability, in a simple metric and from the absence of an established analytical paradigm to guide its conduct. These challenges increase the importance of explaining policy decisions to the public, in particular given that macroprudential instruments can have significant distributional effects, which give rise to pressures on the policymaker to delay action.

The Committee on the Global Financial System (CGFS) has an ongoing interest in the conceptual and practical aspects of macroprudential policy making. It mandated a Study Group chaired by Cecilia Skingsley (Sveriges Riksbank) to explore how objective-setting and communication can help address those challenges as part of the overall macroprudential policy framework.

The following report summarises the Group's conclusions. It underlines the importance of adopting a systematic policy framework that channels policymaking through a set of predictable procedures. Key elements of an effective framework are the articulation of the ultimate goal through several intermediate objectives, and a communication strategy that clearly links actions to these objectives, helping to anchor stakeholders' expectations. Communication may also serve to influence stakeholders' behaviour. Perhaps more than in other policy areas, a greater effort is required to explain the macroprudential policy framework and to ensure that the goal of maintaining financial stability is valued by the wider public. Such an appreciation facilitates policy actions early on in the cycle, when instruments may be more effective and adjustment less costly.

I hope that this work will be useful to macroprudential policymakers' efforts to build robust policy frameworks and to design effective communication strategies.

William C Dudley

Chair, Committee on the Global Financial System
President, Federal Reserve Bank of New York

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Executive summary

Clear policy objectives and communication strategies are essential ingredients of any public policy framework. Macroprudential policy is no exception. If anything, a number of factors specific to this area of policy make the articulation of objectives and communication both more challenging and more important. For one, financial stability, the principal overall objective of macroprudential policy, does not have a commonly agreed definition, let alone a quantitative expression. In addition, there is no analytical paradigm to guide policy decisions, and empirical results on the strength of transmission channels between instruments and objectives are relatively sparse.

These characteristics of macroprudential policy are compounded by a third challenging factor for policy: political economy considerations that translate into difficulty implementing tighter policy at an early stage, before vulnerabilities have built up. Macroprudential policy has distributional effects and can significantly constrain the behaviour of market participants. This puts greater emphasis on communication in order to ensure that the public appreciates the importance of the objective of policy and understands how instruments help achieve it. Typically, economic agents perceive that financial risks recede in buoyant times and peak in stressed times, and therefore see little reason to pull back from (unsustainably) profitable risk-taking early enough. Designing communications such that risk warnings reach key stakeholders and lead them to appropriately alter their behaviour is challenging.

This report discusses how these challenges might be addressed through objective-setting and communication. The following main messages emerge. First, macroprudential policy can benefit from a systematic policy framework that channels policymaking through a set of predictable procedures and uses as key elements the articulation of objectives and communication about how actions help achieve these objectives. The role of communication is to shape and anchor stakeholders' expectations, thereby making policy more effective and enhancing policymakers' accountability. Arrangements that help stakeholders predict policy are important because in the absence of a well articulated paradigm, macroprudential authorities have substantial discretion and need to exercise judgment in setting instruments.

Second, relative to monetary policy, and also because of the early stages of its use, macroprudential policy needs to put more effort into explaining this policy framework. This can help generate a high degree of appreciation across society for the need to maintain financial stability, itself important for the effectiveness of macroprudential policy because it facilitates early tightening of policy when risks are not yet elevated.

Third, setting intermediate objectives for financial stability as part of a systematic policy framework – if regularly reviewed to ensure their continued relevance – has advantages and disadvantages. Intermediate objectives can facilitate the coordination between different policymakers responsible for financial stability and may also help counteract inaction bias. That said, while intermediate objectives may be easier to achieve, they may not be sufficient to achieve the overall objective. As our knowledge about the transmission channels of policy improves, the importance of intermediate objectives may decline, much as the weight placed on credit and money growth targets declined for inflation targeting central banks.

Fourth, communication used as an instrument in its own right (ie disconnected from announcements of policy actions) could have a greater impact in the context of macroprudential policy than in monetary policy but also faces greater challenges. Early in the credit cycle, warnings on risk-taking may have limited effect as risky strategies still appear profitable. By contrast, at later stages risk warnings may have a large impact on behaviour but, as economic agents tend to adjust their behaviour abruptly, it is possible that the warning may have unintended, destabilising results. Communication would therefore appear to be a more easily controllable, and hence more useful, instrument in its own right, if warnings attracted more attention at an early stage, before risks become elevated. The report considers some of the ways in which communication might be undertaken that may aid in this respect.

Fifth, communication about risks should not be less transparent when risks are elevated. Withholding information that is typically published may in itself be interpreted as bad news and prolong uncertainty about how bad things really are. The communication strategy should be designed to increase an authority's reputation for predictable, consistent policymaking, for example by defining a set of risk indicators that can be published independently of whether risks are elevated or by using a concise description of financial system vulnerabilities that facilitates comparison over time despite being more qualitative in nature.

Finally, the greater the impact of macroprudential tools on the central path of the macroeconomy, as opposed to tail risks to financial stability, the more difficult it is to separate the communication of macroprudential policy from that of monetary policy. Challenges arise if alternative policies exert pressures in different directions on the central path. In this case communication would probably need to focus on the objectives of each policy, on the reasons for policymakers having assigned these objectives, and on how the policy action is likely to contribute to achieving them.

1. Introduction

Clear policy objectives and communication strategies are essential ingredients of successful public policy frameworks. They help enhance policymakers' accountability and strengthen the efficacy of their actions. Macroprudential policy is no exception. If anything, well designed objectives and communication strategies have greater importance in macroprudential regimes, which are in their early stage of development, than in other, more established, areas of policy.

At the same time, the associated challenges are arguably even greater in this area too. This is because of two fundamental characteristics of macroprudential policy. The first is that financial stability, the key overall objective of macroprudential policy, does not have a commonly-agreed definition, let alone one that lends itself to quantification. The second relates to the absence of an analytical paradigm. Policymakers lack a workhorse analytical framework to guide policy decisions, and the body of empirical results on the strength of transmission channels between instruments and objectives is still under development.

These characteristics of macroprudential policy are compounded by a third factor that usually challenges policy: political economy considerations. Macroprudential policymakers often have to overcome strong resistance from stakeholders in the tightening phase of the policy cycle. In the midst of a buoyant credit boom, when borrowers and lenders perceive that financial risks have receded, policy is required to

go against “the grain of the market”, and by doing so it must influence private sector expectations. At the point of decision, the costs of macroprudential actions are felt immediately by some while the benefits are only prospective, widely diffused and difficult to quantify.

Effective communication of the macroprudential authority’s strategy for meeting its objectives is critical in dealing with these challenges. Transparency about the authority’s interpretation of its objectives enables stakeholders to better understand its intentions (policymakers’ “reaction function”). Explanations about the rationale for action can shape market participants’ expectations and decisions.

This report presents the findings of a Study Group mandated to explore how central banks address these challenges.¹ The report explores the interactions between objective-setting and communication and compares the approaches taken in the macroprudential field to those in other policy areas (in particular monetary policy). It builds on members’ contributions and on the discussions at a workshop.

The report focuses on two sets of issues. The first relates to whether and how the overall objectives of macroprudential policy can be translated into a set of quantifiable, intermediate and operational objectives that can facilitate the design, conduct and communication of macroprudential policy, as well as the evaluation of its performance. The second set focuses on whether communication can be sufficiently powerful and precise to be used as a macroprudential instrument in its own right, and how the communication strategy might take into account the interactions with other policy areas.

The rest of this report is organised in five sections. Section 2 provides a factual overview of how objectives are set and of the content of communications about macroprudential policy in the jurisdictions represented in the Study Group. Section 3 discusses how objective-setting and communication can make policy more effective and help enhance the authority’s accountability. Sections 4 and 5 focus on specific aspects of communication: using communication as an instrument in its own right, and the challenges that might arise when monetary and macroprudential policies interact to a sufficient degree to require their communications to be coordinated. Section 6 summarises the key messages that emerge. The Annex contains a definition of key terms and acronyms used.

2. Objective-setting and communication in practice

For most jurisdictions, macroprudential policy has had a short history as a distinct field. Prior to the global financial crisis, only a few countries had used prudential tools with the explicit macroprudential objective to limit system-wide risk.² Hong Kong SAR, Singapore and India are examples of early adopters of this approach. Most countries started to set up formal macroprudential policy frameworks only recently. Given the focus of policy on the effects of the financial cycle, the important role of expectations and the central role played by central banks, it is unsurprising that

¹ See the Annex for the Study Group membership. A companion report, Committee on the Global Financial System (2016), provides an overview of the experiences central banks have gathered with ex ante appraisals of macroprudential instruments.

² See Crockett (2000).

macroprudential policy frameworks have been influenced by other policy frameworks such as those relating to monetary and microprudential policy. This section presents the choices jurisdictions have made regarding two elements of this policy framework: the setting of objectives and the communication strategy.

2.1 Objective-setting

There are three levels of objective of macroprudential policy: (i) the overall objectives that provide the overall goals of policymakers; (ii) the intermediate objectives that are likely to be partial aspects of the ultimate objective; and (iii) the operational objectives that are very closely linked to individual policy instruments. These are discussed in the following sub-sections. Annex Tables 1–3 provide some detail on the specification of objectives in different jurisdictions.

2.1.1 Overall objectives

The overall (ultimate) objective of macroprudential policy is financial stability. This is embedded in the policy frameworks of all the jurisdictions represented in the Study Group. However, frameworks vary across jurisdictions in many respects: first in terms of how the financial stability objective is interpreted, second in terms of whether there are other, additional objectives for the macroprudential authority, and finally, on whether other policy authorities also share in the same objective.

Interpretation of financial stability. As shown in Table 1, all jurisdictions list financial stability as the key objective of macroprudential policy. In many cases the objective is interpreted as applying to the whole financial system, but differences exist in the degree of ambition for the objective. One important distinction relates to whether the aim of policy is to build resilience of financial institutions, markets and infrastructures or, more actively, to reduce the amplitude of the financial cycle by leaning against financial imbalances and misaligned asset price valuations. Table 1 suggests that authorities typically aim for building resilience, with a substantial number also aiming to lean against financial imbalances.

There might also be some tension between interpreting financial stability as primarily pertaining to the banking sector, or more broadly to the system as a whole. A narrower interpretation might better align the objective with the macroprudential authority's powers, while a broader one might better reflect the role of non-banks and the notion that financial stability is ultimately about the real economy.³

Multiple overall objectives for a single authority. Macroprudential authorities typically also have other objectives in addition to financial stability. Multiple objectives can arise because macroprudential responsibilities have been handed to an authority that is already in charge of some other field of policy – for instance, a central bank already in charge of monetary policy with objectives such as price stability, exchange rate stability and maximum employment, or to regulators with microprudential or consumer protection responsibilities (Table 2). Multiple objectives may also be seen as a way of fostering coordination between a dedicated macroprudential authority and other authorities with their own objectives that

³ See Ellis (2014).

interact with financial stability, such as macroeconomic stability or the soundness of individual financial institutions.⁴

Explicit rankings between multiple overall objectives for the macroprudential authority are rare. For example, the Reserve Bank of Australia (RBA) does not rank its objectives because they are perceived to be generally not in conflict. To some extent, not pinning down how objectives are weighed leaves the authority more flexibility because the optimal balance between conflicting objectives may depend on the circumstances in which a policy decision has to be made. That said, the United Kingdom presents a notable exception. The Bank of England's Financial Policy Committee has a primary objective of "contributing to the achievement by the Bank of [its] financial stability objective" and, subject to that, a secondary objective of "supporting the economic policy of Her Majesty's Government, including its objectives for growth and employment".

Multiple authorities with a financial stability objective. Similar issues arise when several authorities share the objective of financial stability. This is often the case when monetary, macroprudential, microprudential and market conduct policies are assigned to separate institutions (Table 2). As noted above, even when central banks do not have a macroprudential mandate, they have a strong interest in financial stability because of their responsibility for payment systems, because financial stability is a condition for a stable transmission of monetary policy, and because of their role as providers of liquidity assistance during crises.

Overlapping financial stability objectives for multiple authorities raise the risk of obscuring the responsibilities of individual agencies, but can also strengthen decision-making if their different perspectives translate to better risk assessment. Governance arrangements can enhance this mutual understanding of respective responsibilities. For example, the Council of Financial Regulators coordinates the work of Australia's main financial regulatory agencies, including the central bank. In addition, there are formal processes for bilateral collaboration between the central bank and the prudential regulator at all levels of seniority. In Europe, the European Systemic Risk Board (ESRB) argued for a leading (or at least supporting) role for central banks in the formulation of macroprudential policy to help coordinate macroprudential with monetary policy.⁵

2.1.2 Intermediate and operational objectives

Macroprudential authorities typically highlight a number of specific aspects of financial stability that individual policy instruments aim to address. Examples include good lending standards for mortgages, absence of excessive household leverage, and limited direct exposures among banks. Some authorities refer to such aspects of financial stability, or links in the transmission chain of macroprudential instruments, explicitly as purposes or **intermediate objectives** of macroprudential policy.

Table 3 provides an overview of intermediate objectives in the jurisdictions represented by the Study Group members. The table also characterises them according to whether they are defined when the overall macroprudential policy framework is introduced or the policy frameworks for specific macroprudential policy

⁴ For an overview of the strengths and weaknesses of different institutional models for macroprudential policy, see eg Nier et al (2011).

⁵ See ESRB (2011) and Nier et al (2011).

instruments are implemented; whether it is explained at that stage how their achievement will be measured; and whether there is a process in place for reviewing them. The overview suggests that about half of the jurisdictions represented in the Study Group explain the intermediate objectives of specific macroprudential actions at the time they implement them. The other half, all members of the ESRB, define intermediate objectives as part of the policy framework, attempting to cover all relevant aspects of financial stability (Box A).

Box A

Intermediate macroprudential objectives in the European Union

EU regulations provide a common legal framework and a set of macroprudential instruments to mitigate systemic risk in the banking sector.^① The European Systemic Risk Board (ESRB), the EU authority responsible for macroprudential oversight, offers recommendations to national authorities on how to operationalise macroprudential policy.^②

The ESRB defines the overall objective as “to contribute to the safeguarding of the stability of the financial system as a whole” and recommends that EU member states “define and pursue intermediate objectives of macroprudential policy for their respective national financial system”. The ESRB has identified the following list of intermediate objectives: (i) to mitigate and prevent excessive credit growth and leverage; (ii) to mitigate and prevent excessive maturity mismatch and market illiquidity; (iii) to limit direct and indirect exposure concentrations; and (iv) to limit the systemic impact of misaligned incentives with a view to reducing moral hazard. Member states should assess the need for more intermediate objectives on the basis of underlying market failures and their specific structural characteristics. Finally, the ESRB recognises that intermediate objectives could be revised as the financial system evolves. These intermediate objectives are an intrinsic part of the EU’s macroprudential policy framework. The recommendation links each intermediate objective to a set of relevant indicators of systemic risk and to macroprudential instruments able to effect the intermediate objective (Table A).

| | Intermediate objective: to prevent/mitigate systemic risk in the banking sector arising from... | | | |
|-----------------------------|---|---|-----------------------------|--|
| | Excessive credit growth and leverage | Excessive maturity mismatch and illiquidity | Exposure concentration | Misaligned incentives |
| Relevant indicators of risk | Credit-to-GDP gap Housing credit and prices | Structural funding ratio (eg net stable funding ratio) Short-term liquidity stress indicators | <i>(To be tested)</i> | Size, complexity, substitutability and interconnectedness of systemically important financial institutions (SIFIs) |
| Relevant instruments | Countercyclical capital buffer Sectoral capital requirements Macroprudential leverage ratio Loan-to-value requirements Loan-to-income/debt (service)-to-income requirements | Macroprudential adjustment to liquidity ratio (eg liquidity coverage ratio) Macroprudential restrictions on funding sources (eg net stable funding ratio) Macroprudential unweighted limit to less stable funding (eg loan-to-deposit ratio) Margin and haircut requirements | Large exposure restrictions | SIFI capital surcharges |

^① Capital requirements regulation and directive (CRD IV/CRR). ^② ESRB (2013), further developed in ESRB (2014, 2015).

Prioritising the intermediate objectives of the US G-SIB surcharge

In July 2015, the Federal Reserve Board (FRB) adopted its final rule to implement risk-based capital surcharges for global systemically important bank (G-SIB) holding companies (the “G-SIB surcharge”). It explained that the policy instrument had three intermediate objectives.^① The first, and principal, objective is to lower the probability of default for a financial firm – in this case, a G-SIB – whose failure could undermine financial stability and cause outside negative externalities. The two secondary objectives are to create incentives for G-SIBs to shrink their systemic footprint and to offset any funding advantage that a G-SIB has on account of it being perceived as too big to fail (TBTF).

The main reason the Board prioritised the first objective is that it is directly tied to the Board’s mandate for implementing the G-SIB surcharge. Under the Dodd-Frank Act, the Board has authority to develop prudential standards for bank and non-bank systemically important financial institutions “to prevent or mitigate risks to the financial stability of the United States that could arise from the material financial distress or failure, or ongoing activities, of large interconnected financial institutions”. Since the most significant way in which a GSIB is likely to compromise financial stability is through its failure, the most direct way to mitigate risks to financial stability posed by a G-SIB is to reduce its probability of failing.

Another reason for prioritising the objective of lowering the probability of default for G-SIBs is that calibrating the surcharge so as to put this objective into effect requires fewer assumptions than the two secondary objectives. The Board’s methodology for putting its principal objective into effect involves setting the G-SIB surcharge so as to reduce the probability that a G-SIB would default by an amount that would equalise the expected systemic loss of the failure of the G-SIB with the expected systemic loss from the failure of some given non-G-SIB reference bank. Operationalising the G-SIB surcharge based on the objective of incentivising a G-SIB to shrink its systemic footprint would require evaluating a large number of factors, many of which the academic literature has not fully pinned down. These include the socially optimal scale and scope of G-SIBs; the degree to which higher capital will reduce the intermediation activities of G-SIBs; the extent that reduced activity will cease to take place versus migrating to other banks or non-banks; the economic cost of some intermediation activity ceasing to take place; and the relative riskiness of intermediation activity being undertaken by G-SIBs versus by non-banks. Likewise operationalising the G-SIB surcharge based on the secondary objective of offsetting the TBTF funding advantages would require evaluating the size of the TBTF subsidy and estimating the respective costs of equity and debt.

^① See FRB (2015).

Intermediate objectives are typically not directly measurable and focus only on financial stability, remaining silent about other overall objectives of the macroprudential authority. One exception is the intermediate objectives that the Bank of England’s Financial Policy Committee set for the countercyclical capital buffer (CCyB).⁶ In some cases, several intermediate objectives have been set. Box B provides an example of how multiple intermediate objectives are prioritised in the determination of the capital buffer for systemically important institutions in the United States.

Jurisdictions rarely explain at the time they set intermediate objectives what considerations would play a role if the objectives needed to be revised. Similarly, only some explain at the time they set intermediate objectives how they would evaluate

⁶ This choice reflects the fact that the Financial Policy Committee has primary and secondary overall objectives (ie financial stability and, subject to that, support for the economic policy of the UK government) and that the purpose of the CCyB is to increase the stability of the banking sector without restricting the essential supply of credit to the real economy.

their achievement. Instead, official communication occasionally includes references to indicators that authorities will use to evaluate the impact of policy. For instance, when changing the CCyB authorities refer to the level of the credit-to-GDP gap, a key indicator for setting the buffer.⁷ Such indicators are not objectives against which the authority would expect to be evaluated: that is, they signal risk but are not outcomes the authority intends to influence. The Bank of England emphasises that while a suite of indicators are useful for shaping its views, helping it explain its decisions publicly and enhancing the predictability of policy, “no single set of indicators can ever provide a perfect guide to systemic risks, or the appropriate policy responses, and judgement will play a material role in all FPC decisions”.⁸

2.2 Communication

Macroprudential authorities use a wide range of channels to communicate various aspects of policymaking: objectives and policy strategy, risk assessment, and policy process, decisions and path.

In some cases, formal statutory requirements or international recommendations set a benchmark for policy communication. For example, in the EU, the ESRB recommends publishing a set of supporting indicators in addition to the credit-to-GDP gap as part of the operational framework for the CCyB. Also, when an authority reduces the buffer, it needs to communicate for how long it expects to not increase it again and explain the basis for this assessment.⁹

Authorities tend to exceed those benchmarks in communicating policy objectives and strategy, risk assessments, and policy process, decisions and path. Table 4 provides an overview of the channels and contents of communication by authorities.¹⁰ They all publish a semiannual or annual report that contains information about risks to systemic stability, including individual chapters on specific risks, and in some cases, a discussion of specific instruments. A few publish meeting records, some a statement following policy meetings. Several publish indicators of financial stability considered relevant for the setting of macroprudential instruments. Box C provides an example for the Bank of Japan’s financial stability communication. It illustrates that the communication strategy encompasses more than speeches and reports. Direct engagement, for example in the form of seminars, can also be a useful channel to raise key stakeholders’ risk awareness. The following paragraphs discuss in more detail the type of information that is typically published and the motivation for doing so.

Objectives and policy strategy. Explaining objectives and policy strategy can be particularly valuable when the macroprudential authority has multiple overall objectives and it is unclear how these objectives are weighed, or when overall objectives have not been operationalised. In situations in which multiple authorities share the financial stability objective, explaining the macroprudential authority’s perspective may also help stakeholders to predict policy.

⁷ See guidance on this issue in Basel Committee on Banking Supervision (2010) and the proposed CCyB policy statement by the FRB (2015).

⁸ www.bankofengland.co.uk/financialstability/Pages/fpc/coreindicators.aspx.

⁹ EU capital rules of the Capital Requirements Directive (Article 136(7)).

¹⁰ See Born et al (2011) for an overview of communication channels and target groups for macroprudential policy communication.

Communication about financial stability by the Bank of Japan

The Bank of Japan uses a wide range of channels in its communications about financial stability (Table C). Multiple standalone documents describe the Bank's policy towards financial system stability.^① Annual Reports describe overall objectives of the Bank's financial stability policy and evaluate the measures taken to ensure the stability and improve the functioning of the financial system. Occasionally, senior officials, including members of the Bank's Policy Board, explain in speeches the overall objectives of financial stability policy and their assessment of the state of the financial system.

The Bank's analysis and its assessment of the financial system are also covered by its *Financial System Report* and *Financial System Report Annex Series*. The aim is to share the Bank's risk assessments with a broad range of stakeholders. Based on its risk assessment, the Bank selects issues to be taken forward with financial institutions as part of its on-site examination, the priorities of which are published annually.^② On-site examinations and daily off-site monitoring serve both to issue warnings and to provide financial institutions with advice. The material is also covered in seminars and meetings with financial institutions.

Selected communication channels for financial stability

Table C

| Communication channel ^① | Frequency | Main audience | Main type of information |
|--|-------------------------------------|--|---|
| Standalone documents | Occasionally | General public | Objectives and policy strategy; policy process |
| <i>Annual Report</i> | Annually | General public | Objectives and policy strategy |
| Speeches | Occasionally | General public | Objectives and policy strategy; financial stability outlook |
| <i>Financial System Report</i> | Semiannually | Broad range of stakeholders | Financial stability outlook |
| <i>Financial System Report, Annex Series</i> | Occasionally | Broad range of stakeholders | Financial stability outlook |
| <i>On-Site Examination Policy</i> | Annually | Financial institutions | Policy process |
| On-site examinations | Depends on institution ^② | Financial institutions | Financial stability outlook |
| Off-site monitoring | Daily | Financial institutions | Financial stability outlook |
| Seminars, meetings | Occasionally | Financial institutions | Financial stability outlook |
| Council for Cooperation on Financial Stability | Twice a year | Financial Services Agency | Financial stability outlook |
| International cooperation | Occasionally | Overseas central banks and supervisory authorities | Financial stability outlook |

^① Publications in italics. ^② The frequency of on-site examinations depends on the institution's financial health and systemic importance.

Cooperation with other authorities with a financial stability objective is also an important part of the Bank's communication strategy. For example, the Bank of Japan and the Financial Services Agency regularly share information at the Council for Cooperation on Financial Stability, established in June 2014. International cooperation with overseas central banks and supervisory authorities serves as an opportunity to exchange views on financial stability.

^① See eg Bank of Japan (2011). ^② See eg Bank of Japan (2016).

Communication about objectives and strategy typically exploits several channels, mirroring the needs of diverse groups of policy stakeholders. It includes statements and press conferences following policy meetings, speeches by policymakers, standalone papers (such as the Bank of England's *Policy Statements*), annual reports and testimonies in parliament. Publications tend to focus on the financial stability impact of policy. That said, other objectives, such as supporting real economic activity, gain weight when policy settings are loosened. In some situations, the interactions between macroprudential and other policy objectives are also addressed (Chapter 5).

Macroprudential authorities explain policy objectives both when taking specific policy actions and when describing their overall strategy. In the former case, communications typically sketch the transmission channel of the policy action to its intermediate objectives. For example, both the Australian Prudential Regulation Authority (APRA) and the Reserve Bank of Australia explained that the purpose of certain macroprudential actions taken by APRA and the Australian Securities and Investments Commission (ASIC) in December 2014 was to ensure robust lending standards in the domestic mortgage market. In the context of explaining the policy strategy, authorities communicate in more detail how meeting intermediate objectives helps achieve financial stability. This discussion may include a description of what instruments may address certain intermediate objectives (see Box A) and of the approach taken to calibrating instrument settings.¹¹

The CCyB provides an example of a policy instrument for which many authorities have explained objectives and strategy in detail, in part because of statutory requirements. Most jurisdictions publish a benchmark that informs their calibration decisions (the "buffer guide"). Many provide additional information relevant to their calibration decision. In France, the High Council for Financial Stability has indicated when it might activate the CCyB.¹²

Policy process. The process by which policy is conducted is typically explained in standalone documents and speeches. For example, the Netherlands Bank and the RBA have published standalone documents in which they explain how they fulfil their financial stability role.¹³ The Bank of England has explained how it conducts macroprudential policy on a quarterly cycle, starting from an internal assessment of risks submitted to the Financial Policy Committee via "briefing", "issues" and "policy" meetings, and ending with the communication of recommendations and decisions.¹⁴

This type of information helps stakeholders to understand how policy is developed, when and at what stage they can influence it (eg by responding to consultations), and who carries responsibility for what aspect of policy (eg the central bank's financial stability division for risk assessment; the supervisory authority for implementing policy). Section 3 discusses this point in detail and argues that a well structured and clearly communicated policy process may be particularly important for macroprudential policy.

The financial stability outlook. Pointing out risks to financial stability lays the groundwork for explaining policy. It can also prompt the public to reassess risks, and it might encourage other stakeholders to avoid taking excessively risky actions

¹¹ See CGFS (2016) for approaches used to calibrate macroprudential instruments.

¹² See HCSF (2015).

¹³ See Netherlands Bank (2016) and APRA and RBA (2012).

¹⁴ See Tucker (2013).

(see Section 4). If risks are assessed through the lens of the authority's policy strategy or by reference to an established set of indicators, communication about those risks can also help stakeholders predict future policy actions. However, data confidentiality and concerns about triggering adverse market reactions set practical limits to the communication of policymakers' risk assessments.

Macroprudential authorities typically publish an assessment of risks in the financial system in the form of a financial stability report, usually once or twice a year. Many also publish background papers explaining their methods for risk assessment. Speeches and statements following policy decisions are other avenues for communicating risk. Some authorities assess risks through the lens of macroprudential strategy. For example, the National Bank of Belgium signalled its awareness of risks in the real estate sector and its willingness to address them before setting minimum risk weights on mortgages (Box D).

The French High Council for Financial Stability has, since its inaugural meeting in June 2014, pointed out on a quarterly basis economic developments that are, in its opinion, liable to trigger a macroprudential policy intervention (Box H).

Box D

The impact of recommendations and risk warnings about the Belgian property market

Over two decades, strong house prices and mortgage growth pushed up household debt in Belgium. More recently, the loan-to-value ratios (LTVs) and debt service-to-income ratios (DSTIs) of newly issued mortgages started to increase. The National Bank of Belgium (NBB) responded by warning in its 2012 and 2013 *Financial Stability Reports* that banks' credit losses might rise, and suggested that banks and authorities "maintain greater vigilance over ongoing market developments and monitor more strictly whether sufficiently conservative credit standards and adequate risk pricing are applied to all new mortgage loans. Where necessary, standards should be tightened".^①

This communication was generally understood by the sector and received considerable press attention. Some credit standards were strengthened in response. Banks significantly increased their commercial margins on residential real estate loans and considerably shortened the maturity of new mortgages. However, the housing market remained buoyant and the strengthening of some credit standards appeared insufficient to significantly reduce risks stemming from the residential real estate market.

At the end of 2013, following consultation with key stakeholders, the NBB therefore raised risk weights on residential real estate exposures by 5 percentage points for all banks applying the internal ratings-based approach (IRB) in the measurement of risks. (After a period of very low losses on mortgages, banks following the IRB approach applied lower risk weights than those using the standardised Basel II weights). The NBB also increased its surveillance of lending standards.

While LTVs and DSTIs fell in 2013 and 2014, the improvement of mortgage portfolios came to a halt in 2015. The very accommodative stance of monetary policy started to interact with the macroprudential measures, leading to relatively strong mortgage growth after some softening in 2013 and 2014. These new risks have been extensively discussed with the sector, and the NBB has decided to take additional macroprudential measures over the course of 2017 that are targeted more towards the riskiest segment of mortgage loan portfolios.

Although it is difficult to assess the role played by communication, the warnings and measures were obviously well understood by the sector, which was undoubtedly helpful in achieving the objectives. The experience suggests that communication is an important complementary tool to macroprudential actions, especially when macroprudential policy interacts with other economic policies.

^① National Bank of Belgium (2012), p 107.

Policy decisions. Communication of policy decisions differs between macroprudential and monetary policy. For monetary policy, the policy decision is the main focus of regular communications, and central banks typically publish records of policy meetings. In contrast, so far only a small number of macroprudential policymakers publish records of meetings. Another difference to monetary policy is that some macroprudential authorities have been explicitly granted the power to make recommendations to other authorities, sometimes on a comply-or-explain basis. The UK Financial Policy Committee can make such recommendations to the microprudential and market conduct regulators. In 2014, the UK Financial Policy Committee recommended that the microprudential and market conduct regulators “should ensure that mortgage lenders do not extend more than 15% of their total number of new residential mortgages at loan to income ratios at or greater than 4.5”.¹⁵ The National Bank of Belgium can issue recommendations to government and parliament regarding the imposition of macroprudential instruments with a significant distributional impact.¹⁶

“Forward guidance” about the likely path of policy. Published information about an intended future policy decision helps make policy more predictable and can bring specific risks to the attention of households and firms, thus helping to shape their choices (see Section 4). However, this may come at the cost of reduced flexibility to amend policy should circumstances change.

The forward guidance that macroprudential authorities provide is usually quite broad, explaining their policy strategy rather than specifying in detail intended changes in instrument settings. Given the uncertainties surrounding the transmission of policy decisions, authorities tend to follow a gradual adjustment of policy instruments. If stakeholders place too much weight on the central path of future policy, they might create undesired effects by front-running future decisions. For example, if households are advised that LTV limits are likely to be tightened in the future, they might rush to take out high-LTV mortgages, which may increase the vulnerability of the economy to shocks.

A number of authorities have provided broad guidance about likely future policy actions. The RBA flagged additional steps that might be taken by other regulators to reinforce sound lending practices.¹⁷ In 2012, the Hong Kong Monetary Authority (HKMA) stated that “the HKMA will continue to monitor the market situation closely and introduce appropriate measures in response to changes in the property market cycle to safeguard banking stability”.¹⁸ The Bank of Italy explained in its 2015 *Financial Stability Report* that it was unlikely to increase the countercyclical capital buffer in 2016.¹⁹ Following the reduction of the countercyclical capital buffer rate to 0% in July 2016, the Bank of England advised that absent any material change in the outlook, it expected to maintain a 0% UK countercyclical capital buffer rate for at least a year. The Dutch Financial Stability Committee recommended that after 2018, LTV ratio caps for mortgages should gradually reduce to 90%.²⁰

¹⁵ Bank of England (2014a).

¹⁶ In Belgium, LTV caps and debt-to-income ratio caps fall within the competence of the federal government because their distributional impact is felt to be significant.

¹⁷ See RBA (2014).

¹⁸ Hong Kong Monetary Authority (2012).

¹⁹ See Bank of Italy (2015), p 12.

²⁰ Implementation of this recommendation depends on the Dutch Ministry of Finance.

3. Objective-setting and communication as part of a systematic policy framework

Macroprudential policy frameworks blend (to different degrees in different applications) requirements for the policy process and the use of policy instruments with room for deviating from these requirements and to decide on the basis of judgment. This combination is not uncommon in other policy areas. It is of key importance when the policy area is relatively novel but policy success is directly linked to how well the conduct of policy anchors the public's expectations.

From this perspective, objectives and communication are central elements of a **systematic policy framework**. The comparatively rigid parts of the policy framework can provide a disciplining device for the policymaker (for instance, by counterbalancing any inaction bias). This can be particularly useful when the policymaker has not yet established a good reputation for conducting macroprudential policy. If clearly communicated, a systematic policy framework offers the public a framework to interpret policy actions and to form expectations consistent with policy intentions.

This section covers this set of issues, starting with a general discussion of the characteristics of a systematic macroprudential policy framework (Section 3.1) and continuing with a discussion of various specific aspects, such as the setting of intermediate objectives (Section 3.2), procedural requirements in the conduct of policy (Section 3.3) and communication linked to individual instruments (Section 3.4). To provide a different perspective, Section 3.5 touches upon objective-setting and communication in two other policy fields: microprudential policy and health policy. Section 3.6 summarises the key challenges that macroprudential policymakers face when setting objectives and communicating policy and suggests approaches for addressing these challenges.

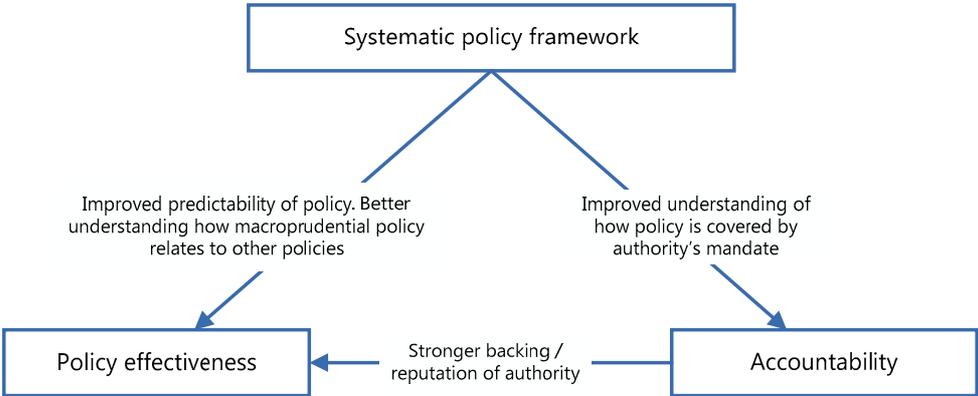
3.1 A systematic policy framework

A policy framework is systematic to the extent it channels policymaking through a set of predictable procedures. The role of predictability is to shape and anchor stakeholders' expectations, while that of the procedures (broadly described) is to formalise requirements in terms of objectives, consultation and communication of policy decisions.

Systematic policy is not synonymous with adherence to rigid mechanical rules. The original debate around the conduct of monetary policy contrasted two extremes: a policy set according to mechanical rules and one in which the policymaker is entirely unconstrained when calibrating its instruments to achieve its objectives. Systematic policy allows judgment to play a crucial part in the choice and calibration of instruments as long as decisions are taken following set procedures and are transparently linked to well defined objectives. Examples of procedural requirements include public consultations, the conduct of cost-benefit analysis before deploying an instrument and ex post assessment of the effect of past decisions. Such restrictions have precedents in other policy areas with similarly strong distributional effects, such as microprudential and competition policy.

Systematic policy is based on transparency about the policymaker’s goals and about how current and future policy actions will help achieve those goals. For instance, the authority may commit to describe regularly the risks it monitors, or it may be obliged to publish ex ante the strategy it intends to follow in taking policy actions.²¹ Transparency helps to enhance the authority’s accountability, which, in turn, can increase the extent to which its policy decisions find support among its stakeholders. Systematic policy refrains from surprising private sector decision-makers, conscious that the potential short-term gains of doing so may be outweighed by longer-term costs. Figure 1 summarises these relationships between a systematic policy framework, the accountability of the policymaker and the effectiveness of policy.

Figure 1:
Systematic policy framework, policymaker accountability and policy effectiveness



The academic literature has characterised as “systematic” a policy framework that imposes transparent, well understood constraints on the policy formation process. That process in a systematic policy framework takes the form of a contingency plan. The plan can be updated to reflect new information, an improved understanding of the environment or shifts in policy priorities. But in systematic frameworks these updates to the plan themselves respect a process. They are consistent with the communicated objectives and are explained to the public (McCallum (2004)). In Woodford’s (2003) words, such a framework “... allows that sort of flexibility that is often associated with the term ‘discretion’...” while avoiding the disadvantages of discretionary policy pointed out by Kydland and Prescott (1977).²²

A systematic framework may be more important to the success of macroprudential policy than for other fields of public policy. An important reason is the relatively underdeveloped conceptual and empirical paradigm underpinning decisions. This has two consequences. First, it puts a premium on the use of judgment, which, exercised in a non-systematic manner, can hinder the predictability and the

²¹ For example, the UK Financial Policy Committee is required to publish a statement of the general policy that it proposes to follow in relation to the exercise of its powers of direction. See Bank of England (2014b, 2015a).

²² Kydland and Prescott (1977) pointed out that economic policy is not a game against nature, but against rational agents. Rules help policymakers take into consideration the effect of future policies upon agents’ current decisions.

effectiveness of policy. Second, in the absence of a clear yardstick for measuring success, systematic and transparent processes for conducting policy can play an important role in increasing accountability.

Communications about objectives and actions are a central element of a systematic macroprudential policy framework. A clearly communicated systematic policy framework can facilitate taking difficult decisions, such as implementing a tighter policy stance. Often, macroprudential instruments can be more effective when tightened early. It may be more difficult to rein in a credit boom after it has gathered pace and expectations have become de-anchored. But tightening is more difficult to communicate in the absence of clear signs of incipient financial stress. This challenge can be greater when the policymaker has not yet established a good reputation for conducting macroprudential policy.

The political economy pressure in favour of inaction can be substantial. The costs of tighter macroprudential policy are felt much sooner than its benefits. In fact, if no crisis occurs the benefits may not be directly observable at all. In addition, households and firms dislike regulatory interventions that restrict their ability to enter into transactions they believe they can afford, such as taking out a high-LTV mortgage. A decision to tighten policy is likely to be more easily digestible if it is the outcome of a policy process that households and firms understand and have learned to appreciate for its contribution to financial stability.

Arguably, macroprudential policy finds itself in the same situation as monetary policy did a few decades ago when some central banks accompanied the design of inflation targeting regimes with the establishment of a systematic framework for monetary policymaking. This framework helped to ensure transparency and accountability in the presence of considerable uncertainty about how well inflation could be targeted (see the case of New Zealand in Box E).

Box E

Monetary policy frameworks in the early stage of inflation targeting: the case of New Zealand

The Reserve Bank of New Zealand's monetary policy framework in the early 1990s offers an example of a policy framework that helped enhance accountability and appears to have improved the predictability of policy.^① While the focus of monetary policy had been on containing inflation since the mid-1980s, its price stability objective was put into law in 1989. The move from multiple and shifting targets and political control to a statutory, published inflation target given to an operationally independent central bank is very likely to have aided markets in anticipating future policy directions and to have stabilised inflation expectations.

The frequency of assessments of the likelihood of meeting the inflation target (quarterly) was set to balance the risks of adjusting policy too gradually or too aggressively.^② These risk assessments were published together with likely causes for why inflation differed from target, and the likely future path of policy, including the policy rate. Different scenarios illustrated the conditionality of the forecast path. The comparatively high degree of transparency does not appear to have given rise to reputational risk.^③

^{①,③} See eg McDermott (2016). ^② See Reserve Bank of New Zealand (1997), p 32.

3.2 Setting and communicating objectives

Objectives provide context for macroprudential policymaking. They provide a purpose to the authority and constrain the use of its powers. In addition, the authority will be evaluated against the benchmark defined by the public's understanding of the stated objective of policy. Hence communication plays a key role in this context. This section provides a discussion of the interactions between objective-setting and communication.

Arguably, convincing the general public of the value of financial stability as an **overall objective** of policy requires a more convincing narrative than communicating the value of maintaining price stability or promoting growth. Behaviour detrimental to financial stability can appear individually highly profitable (eg levering up in the hope of benefiting from rising property prices). By contrast, behaviour detrimental to consumer price stability, such as a firm raising its profit margins, may not be individually profitable because the firm would face declining demand. In addition, the disadvantages of inflation are keenly felt by a broad range of agents as soon as inflation picks up, especially by those with fixed nominal incomes, whereas the costs of heightened financial instability may not be felt at all until much later when risks materialise.

In fact, there is an argument for macroprudential authorities using a real economy narrative and explaining how policy measures affect income and unemployment, variables to which households relate more easily than to financial stability.²³

Setting **intermediate objectives** can help with this communication challenge by enhancing the authority's accountability and by facilitating cooperation with other authorities with a financial stability objective. These advantages need to be balanced, however, against the loss of generality as these intermediate objectives are narrower and partial.

The benefits of setting and communicating intermediate objectives are threefold.

First, to the extent that intermediate objectives make it easier to evaluate the policy's success, they add a degree of accountability. This may be useful in particular in jurisdictions in which macroprudential authorities have not yet established a reputation for successfully managing the ambiguity resulting from multiple objectives, underdeveloped analytical frameworks and lack of data.

Second, setting intermediate objectives ex ante, before deploying the corresponding instrument, may help to mitigate a possible inaction bias. It is probably more straightforward to justify policy actions with respect to an intermediate objective than tracing out the entire transmission process up to financial stability. The potentially more intricate debate of how achieving the intermediate objectives contributes to achieving financial stability can take place earlier, before there is a need for concrete policy actions.

Finally, setting intermediate objectives ex ante may also be useful when there are substantial benefits from coordinating macroprudential policy actions across several authorities whose interpretation of financial stability may not coincide. This was arguably the case in the EU, and was one of the reasons for requiring each national macroprudential authority to set intermediate objectives for macroprudential policy,

²³ See Stracca (2014) and Ellis (2014).

against the background of an EU body, the ESRB, recommending a set of common intermediate objectives (see Box A).

That said, referring to partial aspects of financial stability, or links in the transmission chain of instruments explicitly also as “intermediate objectives” may also have disadvantages.

Intermediate objectives may be easier to achieve but they may not achieve the overall objective of financial stability. An example from monetary policy is the period prior to inflation targeting. Central banks aiming for price stability chose as intermediate targets variables that appeared to be related to their goal variables, but which were thought to be easier to control than inflation – typically, alternative monetary aggregates. As it turned out, the link between these intermediate objectives and the overall goals of policy broke down around the same time as this approach was being applied. This risk – that achieving the intermediate objective might have little bearing on achievement of the ultimate goal – has induced Australia to avoid setting intermediate objectives for macroprudential policy entirely and to rely instead on explaining the benefits of early action and, in each instance, how deploying a policy instrument relates to financial stability.

By contrast to overall objectives, intermediate objectives need to be reviewed regularly to ensure their continued relevance. They might lose relevance as risk-taking changes format or as new insights emerge on their relevance for overall financial stability. For example, the ESRB recommended that macroprudential authorities in the EU periodically assess the appropriateness of their chosen intermediate objectives in view of the experience gained in operating the macroprudential policy framework, structural developments in the financial system and the emergence of new types of systemic risks.²⁴ In Sweden, the macroprudential authority, Finansinspektionen, reviews intermediate objectives to financial stability at least twice a year.

Ideally, intermediate objectives taken together should cover the entire spectrum of risks to financial stability. This coverage may follow a breakdown by sector (eg stability of the banking sector, of asset managers and institutional investors, of shadow banks), by economic characteristics of vulnerability (eg relating to leverage, maturity mismatch) or by the intended effect of policy (eg increasing resilience, dampening fluctuations in credit).²⁵ Each of these classifications has its own advantages and disadvantages in terms of theoretical appeal, quantifiability and ease of communication. In practice, elements of all classifications are in use. For example, the ESRB’s recommended set combines a sectoral breakdown with a breakdown by symptoms of financial instability, and adds an intermediate objective relating to a market failure giving rise to financial instability (misaligned incentives; see Box A).

Quantitative (operational) objectives are set to enable the calibration and evaluation of macroprudential policy actions.

The difficulty consists in finding operational objectives whose relevance in terms of financial stability can be easily explained and which are directly influenced by the policy instrument. Given the uncertainties in the transmission of policy, there is a case for defining the operational objective narrowly, in terms of the direct effect of the tool. For example, a tightening of LTV ceilings for mortgages aims at improving lenders’ resilience to the risk of declining property prices, but the operational policy

²⁴ See ESRB (2013).

²⁵ See IMF-FSB-BIS (2016) for the latter approach.

objective is often cast in terms of reducing the average LTV in banks' loan pools rather than their ability to weather shocks.

Data availability is another factor shaping operational objectives. Data are more readily available for objectives that are close to the policy instrument in question. For some multi-pronged actions, such as increased intensity of supervision, it may be near impossible to set a single operational objective. Similar challenges are posed by objectives targeting lending standards, which are hard to measure for diverse portfolios such as property development.

In summary, quantifiable, operational objectives should enable meaningful calibration and evaluation of the instrument's impact. This suggests that they should be two-sided (to reflect trade-offs implied by multiple overall objectives), reliably relate to the sources of financial stability, and be measurable in a timely fashion. Unfortunately, these conditions are unlikely to hold simultaneously. In practice, data availability and the ease of linking the objective to the instrument are key. The prevalent operational objective is compliance with the instrument setting (eg banks only granting mortgages with an LTV below a regulatory cap) rather than, more broadly, a measure of the extent to which financial stability has indeed benefited. This is not ideal because the former (compliance with the instrument) does not imply the latter, for example because of unintended side effects of the instrument's deployment.

3.3 Defining and communicating procedural requirements

Procedural and transparency requirements for macroprudential objectives are typically codified in law in general terms, while the details are left to the authority to spell out.²⁶ As an example, the EU Capital Requirements Directive requires national authorities to announce quarterly the countercyclical buffer rate and a justification for its setting, including the credit-to-GDP gap. Authorities need to provide a formal justification if institutions are given less than the recommended 12 months to implement an increase in the buffer rate. When the buffer rate is lowered, authorities must indicate the period during which they are unlikely to raise it again.²⁷ However, the discretion to choose the buffer rate rests with the macroprudential authority and is not prescribed in the directive.

Macroprudential authorities typically define policy procedures in more detail than required in statute and, in some cases, communicate these procedures publicly (eg Tucker (2013)). A number of other authorities have explained how they intend to calibrate, communicate and evaluate the impact of changes in the countercyclical capital buffer, for example, Federal Reserve Board (FRB) (2015).

Procedural requirements for macroprudential policy in some areas go beyond those set for monetary policy, reflecting the greater challenges of ensuring accountability (see Section 3.1). The reverse may be true in other areas. For instance, the Bank of England's Monetary Policy Committee moved towards publishing (verbatim) transcripts of its monetary policy meetings with a lag, but the Financial Policy Committee does not envisage doing the same for its meetings. This is for three

²⁶ See eg BIS (2011).

²⁷ Article 136(7). This formalises and expands the recommendations in Basel Committee on Banking Supervision (2010).

reasons.²⁸ First, the Committee is a relatively new body and considers that meetings benefit from the ability to hold debates unconstrained by the prospect of a transcript being published. Second, the UK financial system is very concentrated, and invariably the Committee also discusses institution-specific information. Third, the Committee often considers low-likelihood tail events and does not want to risk that they become focal points for investors unless it decides to communicate this.

There are limits to what procedural requirements can achieve. If too detailed, they might constrain policymaking to an undesired degree. For example, requiring a specific method for evaluating a policy may be counterproductive when better evaluation methods become available or when the evaluation method needs to be adapted as the structure of the financial system evolves.

3.4 Ease of communication and instrument choice

The ease of communicating an instrument is one determinant of its effectiveness: if the macroprudential authority cannot easily explain how deploying the instrument affects financial stability, or why it chooses a specific instrument setting, the policy has less support and becomes more vulnerable to attempts to derail the measure.

For example, cyclical macroprudential actions are likely to be harder to communicate than structural actions, for several reasons. First, our analytical toolkit for assessing build-ups in cyclical systemic risk is still in its infancy – and is less well developed than the corresponding toolkit for assessing the fluctuations in inflationary pressure that guide the setting of monetary policy. Second, for some instruments, banks are given several months to implement changes, partly for operational reasons and partly to allow them to implement adjustments in the least costly manner. During that time, the authority is able to revise the setting of the instrument. Such revisions may be particularly difficult to communicate if they occur while banks implement the instrument's previous setting. This issue does not arise in monetary policy, where decisions are effective immediately.

In response, macroprudential authorities might lean towards instruments that are, on balance, easier to communicate. That said, there are situations in which authorities deploy an instrument that is difficult to communicate, for example if despite this difficulty the instrument is best suited to meet the authority's financial stability target, or because the authority may also simply not have the power to use an easy to communicate instrument. In this case, authorities could focus on aspects of the instrument that are more easily communicated. For example, when communicating the framework for capital buffers for systemically important institutions in the United States, the greater ease of operationalising the primary objective of reducing the probability that the institution will default than the secondary objectives (reducing systemic footprint and offsetting funding advantages of systemically important banks) may have played a role in focusing the communication on the primary objective (Box A).²⁹

²⁸ See Warsh (2014).

²⁹ To be sure, however, the Board's mandate under the Dodd-Frank Act to develop prudential standards for systemically important financial institutions (SIFIs) to prevent or mitigate risks to financial stability was the prominent factor.

3.5 Objective-setting and communication in other policy areas

The factors influencing the setting of intermediate objectives are not unique to macroprudential policy, as the following comparison with microprudential, and health policy frameworks suggests. However, their importance varies with the policy under consideration, with governance arrangements, the strength of analytical frameworks and data availability being important drivers of these differences.

Microprudential policy experienced changes in both governance arrangements and mandates in several jurisdictions following the recent financial crisis. The scope of its overall objective – typically, the safety and soundness of financial institutions – is considerably narrower than that of macroprudential policy, given that the notion of financial stability incorporates the soundness of financial institutions. Microprudential authorities often have other overall objectives, for example related to competition or consumer protection. With the focus on the individual institutions, a natural approach to setting intermediate objectives is along sectoral lines, eg ensuring the soundness of the banking or the insurance sector. This structure can then be mirrored by the internal organisation of the authority, thereby facilitating the assignment of responsibilities for each intermediate objective. This contrasts with the inability to clearly separate different aspects of financial stability in macroprudential policy.

The focus on the soundness of individual institutions, together with strong powers, may suggest that the microprudential authority could (and for eg accountability purposes, should) set and communicate quantitative objectives. This does not occur in practice, for several reasons. First, some microprudential authorities interpret their overall objective not as preventing any failure, but as dealing effectively with failures to limit repercussions on the rest of the financial sector – a concept more difficult to measure. Second, microprudential authorities can be less independent from government than central banks, reducing the need for setting objectives in a way that facilitates accountability. Third, with their powers for the direct “transmission” of variations in instrument settings on the activities of regulated or supervised institutions, microprudential authorities rely less on the expectations channel of policy than macroprudential and monetary policy. The expectations of regulated institutions do matter; however, with the transmission of policy being short and stable, expectations can arguably be influenced more effectively by communicating likely future policy interventions than by quantifying intermediate objectives.

Communication is an important instrument to microprudential policy because, backed by supervisory and regulatory powers, it can be narrowly targeted and have a rapid impact on market participants’ risk-taking. While a lot of communication is part of the supervisory process, carefully worded public statements can increase the pressure on institutions to comply without triggering undesired market responses.

Health policy is conducted directly by the government, not an independent authority, and there is, arguably, no need for a policy framework separate to those in use for other government departments.

The overall objective of health policy – in one jurisdiction described as “help people live better for longer” – is unspecific, as is the financial stability objective of macroprudential policy. But how policy instruments contribute to it may be better understood: for example, by improving the training of health staff, by promoting physical activity or by improving hygiene in hospitals. When setting the policy strategy, a key issue is what instruments to focus on when resources are limited.

Health departments' intermediate objectives, sometimes described as strategic priorities, specify the priorities the government chooses for its work at a given point in time. They can also directly reflect the trade-offs between ensuring overall health and resource limitations by making the efficient provision of health care a separate intermediate objective.

In contrast, overall macroprudential objectives imply somewhat less precise trade-offs, eg between financial stability and (in particular short-term) economic growth. These are more difficult to evaluate and enter the formulation of intermediate objectives only implicitly, for example by specifying the intermediate objective to avoid "excessive" leverage.

As for macroprudential policy, communication is key for health policy because many aspects of individuals' health are in the hands of the individuals themselves. Regulatory action (eg prohibiting drinking alcohol while pregnant) is often considered overly interventionist. Influencing stakeholders' assessment of the risks associated with their own actions can then become an efficient way of achieving the overall health objective.

3.6 Summary and key challenges

When building a systematic policy framework, the following challenges with setting objectives and communicating policy appear to be particularly relevant.

Analytical framework, data availability and terminology. Given the inherent difficulties in operationalising the overall objective to preserve financial stability, macroprudential policy requires more effort in explaining the policy framework. Data relevant for the assessment of risks and evaluation of policy are not always readily available, and empirical evaluation of the impact of policy is hindered by the (fortunate) fact that episodes of widespread financial instability are rare.

Communicating the process of policy evaluation can help enhance accountability in this situation. More generally, because macroprudential policy is new and analytical frameworks are underdeveloped, substantial emphasis needs to be placed on educating the public rather than on technical aspects of policy.

Asymmetry of policy impact and observability of costs and benefits. As discussed, macroprudential policy also has salient distributional effects and can significantly constrain the decisions of market participants. A decision to tighten macroprudential policy is likely to be more easily accepted if it is the outcome of a transparent policy process that enables stakeholders to appreciate how policy contributes to financial stability. This increases the burden on the authority to explain how deploying an instrument supports its overall objectives. Setting intermediate objectives can help in this regard because they provide a closer link to policy actions. However, there is always the potential downside that achieving the intermediate objective may not necessarily imply achieving overall financial stability.

4. Communication as a macroprudential instrument in its own right

Communication is an important component of macroprudential policy because it can affect behaviour by influencing the public's perception of the balance of risks and/or by helping stakeholders understand future policy actions. Communication can be targeted at very specific risks and groups of stakeholders and, in contrast to "hard" macroprudential instruments, does not require any specific transfer of powers to the authority.

Despite the importance of communication, it is not clear that it can be reliably used in a targeted, controlled way to alter risk-taking. This section investigates whether macroprudential authorities can use communication as an "instrument in its own right" (ie disconnected from announcements of policy actions) to achieve their objectives.

The next section explains the expectations channel, via which communication might influence actions, and Section 4.2 identifies factors that appear important in determining whether communication can be used as an instrument in its own right. Section 4.3 provides a brief overview of how the effect of communication can be assessed. Section 4.4 summarises key challenges for using communication as an instrument in its own right.

4.1 The expectations channel of macroprudential policy

The effect of macroprudential policy on the public's actions via changes in their expectations has been termed the "expectations channel". In fact, how stakeholders form their expectations is of central importance for the communications strategy of policy. As background, Box F provides a brief overview of the main strands in the economic literature relating to models of expectation formation and learning, drawing relevant lessons for the authority's communication strategy.

As with monetary policy, communication of macroprudential policy can induce a change in stakeholders' expectations through two effects.³⁰

First, communicating new information about risks, even abstracting from any implicit policy action, might alter how the public assesses the balance of risks guiding their financial decisions.

Second, if the audience has understood the authority's objectives and strategy, for instance within a systematic policy framework, it can infer likely future policy actions. This second effect is more important for time-varying instruments, such as the countercyclical capital buffer.

³⁰ For example, the French High Council for Financial Stability commented: "soft interventions (eg, communication) can help to spread the influence of macroprudential policy beyond the scope of existing prudential tools – for example by helping to anchor expectations, and by giving agents an idea of the authority's "comfort zone", beyond which it could be driven to intervene." See HCSF (2014).

To illustrate this idea, take the example of an authority communicating its view of elevated risks to a buoyant real estate market. This can be new information to lenders and investors either because the authority has a reputable record as a neutral analyst, or because it has access to information unavailable to others, for example through the aggregation of investment positions of individual lenders gathered through the supervisory process. Even disregarding any implied macroprudential

Box F

A selective overview of the literature of expectation formation and learning

Economic agents trade and write financial contracts because they differ: in their endowments, their preferences or their expectations. A macroprudential authority can affect agents' income or wealth, but it can also influence their expectations about the state of the economy, risks and the policy reaction function. How agents process the information provided by the authority matters for the authority's communication strategy. This box reviews approaches taken in the academic literature to understand expectation formation and their draws implications for macroprudential communication.

One approach assumes that agents possess an unlimited ability to process information and thus make their decisions on the basis of all information that they can access, including the structure of the economic environment and the likely reactions by other agents. Their expectations are *rational* in the sense that they will, on average, be confirmed by outcomes. In this case, a policymaker's communication strategy boils down to the question of what information to release, conscious of the fact that not revealing any information might be interpreted as a sign of bad news. How the information is communicated is irrelevant for rational agents. Within this framework, seemingly "irrational" behaviour, such as apparent overreaction to released information, short-termism and imitation of others' actions, is explained by diversity in agents' informational endowment and/or by imperfect observability of actions. The policymaker's communication strategy has to assess which of these frictions matter for financial stability when deciding what information to reveal.

The rational expectations assumption has been criticised on two grounds: for overestimating the capacity to process information, and for making theories unnecessarily complicated in order to explain observed empirical regularities. In response to the first criticism, a strand of the literature has focused on theories that assume costs in information processing. One example are models in which agents trade off the costs of listening to, or understanding, new information with the likely benefits.^① In such a context, simple, short and well timed forms of communication are more likely to affect agents' decisions because they lower the cost of processing information. Background briefings for journalists, who transmit information, can also help. In other models, agents trade off the costs and benefits of retaining information that they acquired previously. "Rational forgetfulness" argues in favour of repeating information at regular intervals.

In response to the second criticism, a range of theories build on the assumption that agents make less than full use of their understanding of the economic environment and other agents' strategies when forming expectations about future outcomes. One approach assumes that agents estimate the policymaker's reaction function on the basis of its past behaviour without trying to understand the decision-maker's objectives and information.^② If, in this context, the policymaker intended to amend its current policy strategy, it should highlight this intended break with past practice in its communication.

Another approach takes lessons from evolutionary biology and cognitive psychology stipulating that agents use relatively simple rules of thumb for making decisions and adapt these rules gradually as they experience success or failure, and may not necessarily anticipate changes in other agents' behaviour.^③ Rules of thumb do indeed appear to be relevant to certain aspects of financial decision-making – for example, in "technical", chart-oriented analysis. Here, appropriate communication strategies might be able to affect the rules of thumb used by investors, for example by pointing out how rules that might appear attractive from the perspective of an individual investor might be unsustainable in the aggregate and lead to losses.

^① See eg Sims (2003, 2006). ^② See eg Marcet and Sargent (1989). ^③ See eg Orphanides and Williams (2008) and Evans and Honkapohja (2001).

action, this might induce mortgage lenders to tighten their risk management, thus increasing resilience. If investors lower their central view about future real estate prices, lending growth might abate even without any change in prudential instruments.

That said, the expectations channel might also be destabilising and ultimately require stronger adjustments of prudential instruments or increase the costs associated with deploying them. Taking again the example of an authority communicating new risks to a buoyant real estate market, households might expect caps on LTV ratios of new loans to be tightened, and bring forward demand for high-LTV mortgages.³¹

4.2 Effectiveness of communication as an instrument in its own right

The use of communication with the aim of influencing behaviour is not unique to macroprudential policy, and conditions under which communication can be effective in this regard have been examined in other contexts.³² Even Aristotle offered recommendations for effective communication.³³ He suggested that the speaker's arguments should be clear and that the speech should be adapted to the situation and framed so as to allow the audience connect to what is said. He also highlighted the role of the speaker's reputation. The following subsections apply these points to macroprudential policy.

The key lessons are that the authority should, in calm times, make efforts to clarify the notions of financial stability and macroprudential policy, and explain its own objectives and strategy. Establishing a systematic policy framework (see Section 3) helps because it reduces uncertainty about objectives and strategy, and because it may help the authority to build a good reputation. If the authority does not have a good reputation for risk assessment, its warnings are likely to be ignored. But reputation not only affects the impact of communication: it is itself influenced by the communications strategy. The authority's reputation is likely to suffer if it fails to raise attention to risks before they materialise, or if it issues too many warnings about risks that never materialise. Reputational risk can be reduced if the language of warnings is made stronger, and their frequency increased, as the authority gains certainty about the relevance of the risk for financial stability.

The impact of communication about risks is likely to be both stronger and more difficult to predict when risks are elevated because stakeholders are likely to be more sensitive to new information about the profitability of their investments. It is therefore key to design communications such that risk warnings receive adequate attention at an early stage, before risks become elevated. Referring to regularly published, established, risk indicators could help. If the behaviour of a small set of institutions gives rise to concerns,

³¹ Anticipations of tighter instrument settings on the flow of credit appear more vulnerable to this type of behaviour than those that apply to the stock of credit in that mortgage lenders would be more willing to serve the increased demand in the former case. See eg ESRB (2014).

³² For an introduction, see eg Littlejohn and Foss (2011).

³³ Aristotle focused on effective public speaking. Modern models of communication investigate in more detail the role of barriers to communication: for example, differences in the social or cultural background of the participants, and differences in how they interpret words used by other participants. They also emphasise the interactive nature of communication: participants alternately adopt the roles of "speaker" and "audience".

soliciting their managers' or shareholders' feedback on risk analyses might be another option. If the risk arises in the household sector, framing risks such that they become personal and concrete, and emphasising the benefits of lower exposure to risk rather than the costs of risks materialising, might also raise attention.

4.2.1 Clarity and framing

There are numerous examples of correct risk warnings by central banks ahead of the financial crisis that appeared to have little impact.³⁴ For example, in 2004/2005, Sveriges Riksbank sounded warnings in its *Financial Stability Report* regarding economic developments in the Baltic states (Box H). Aware of the potential shortcomings of their data and analytical frameworks and of the risk that forceful warnings might trigger undesired market volatility, authorities may have phrased their statements too timidly. Risk warnings are likely to receive more attention when they are phrased more forcefully.

The importance of risk warnings might be clearer to the audience if they refer to a set of established quantitative risk indicators. Heat maps of risks across the financial system, such as those developed by the Bank of Spain, aim to play this role.³⁵ In this context, however, there are trade-offs when choosing quantitative thresholds to flag the severity of different sources of vulnerability, and these should be reviewed regularly.³⁶ Even if assessments are more qualitative in nature, over time comparison is facilitated if the results are presented as a concise and structured description of financial-system vulnerabilities.

Risk warnings receive more attention when they are used judiciously. Frequent warnings are likely to lead to communication fatigue, and the public is likely to discount them. This discounting could give rise to an escalating spiral of ever stronger risk warnings with limited effectiveness. That said, no communication when others talk about risks, such as commentators from the private and academic sectors, might confuse the message the central bank intends to convey. Depending on institutional arrangements, a macroprudential authority may have an incentive to flag too many risks or to overstate them in calm financial environments in order not to be caught out should one of these risks materialise. Institutional arrangements that allocate risk assessment and policy implementation to different authorities embed an asymmetry in incentives that can lead to risks being overemphasised. This arises when only the authority responsible for the use of instruments faces the costs of deploying them.³⁷ In addition to helping contain excessive use of warnings, coordinating communication across authorities may help to make non-binding recommendations more effective, in part because it is likely to increase the perceived costs of non-compliance.

Another way of tailoring the message to the intended audience is to use different channels. The authority can increase attention by raising risks in dedicated publications and press releases, and by inviting key stakeholders to comment on the analysis. Authorities might start by raising a warning as part of a regular publication

³⁴ See eg Wilkinson et al (2010).

³⁵ See eg Mencía and Saurina (2016). The authors use a risk scale to rate each of more than 100 indicators and weigh the indicators according to their capacity to anticipate periods of stress in Spain. The resulting heat map illustrates, at different levels of aggregation, the likely sources of risk in the financial system.

³⁶ For an illustration of these trade-offs, see Alessi and Detken (2009).

³⁷ See BIS (2011), p 58.

before emphasising the risk in a dedicated communication if needed. An example is the French macroprudential authority's communication about risks in the French commercial real estate market (Box G). Another example of the effectiveness of targeting communication to groups that would directly suffer from a materialisation of risks is bank investors' response to the Riksbank's *Financial Stability Report*. Investors posed questions to the banks related to the messages in the report (Box H).

Policymakers stand a better chance of influencing their audiences if they make risks personal and concrete. For example, Chan (2015) pointedly asked, "Who would mortgage their children?" in a lecture about the risks of excessive government debt. Audiences may also not be receptive to warnings about risks inherent in a strategy that, so far, has turned out to be very successful and for which there is perceived

Box G

The High Council for Financial Stability's experience with communication about risks in the French commercial real estate market

Strong demand for French commercial real estate (CRE) led to record volumes of transactions in 2014–15. While there were substantial differences across market segments, CRE prices, already elevated, on average increased further. Low interest rates, search for yield and the perception that CRE assets are a safe haven explain some of these developments.

The risk of a reversal was first addressed in December 2015 in the "Assessment of risks to the French financial system", a regular joint publication by the Bank of France and the ACPR (banking and insurance supervisor). (Both are members of the French macroprudential authority, the High Council for Financial Stability (HCSF).^①) They cautioned that the "CRE market still looks imbalanced", and that further analysis was required "in order to improve understanding of this market and the risks associated with the financing of CRE".^② Following its March 2016 meeting, the HCSF indicated that it was "monitoring market developments, participants' exposure to such developments, and CRE funding practices", and that it would publish its risk assessment for consultation shortly. According to the HCSF's strategy, this communication is a "soft" instrument at the disposal of the High Council, as opposed to "intermediate" instruments (eg the adoption of recommendations) or "hard" (ie legally binding) macroprudential measures.^③

In its risk assessment, published on 15 April 2016 for consultation, the HCSF noted some reassuring evidence (eg low vacancy rates in some segments) but also highlighted the risk of an abrupt downward price correction and questioned the capacity of market participants to withstand such a correction. This communication was well covered in the French press, in particular the potential overvaluation and the risk of a turnaround of CRE prices. Seven groups of CRE professionals commented on the analysis and presented their view of recent market developments. While there were few critics of the assessment per se, market participants' answers provided preliminary evidence of the role that communication can have in altering the perception of risks.

In the press release following its June 2016 meeting the HCSF reiterated its assessment that further monitoring was needed regarding developments in specific CRE segments. The HCSF's annual report, published on 15 June, dedicated a full section to risks in the CRE market, including a paragraph on the funding practices of the major French banks and on the macroprudential instruments at the disposal of the High Council to tackle risks in this market. On 21 June 2016 through the publication of the "Assessment of risks to the French financial system", the Bank of France and the ACPR identified the dynamism of CRE prices, especially of Île-de-France offices, as a possible source of vulnerabilities for the French financial system. This publication received considerable attention in the French financial press. On 15 September 2016, a summary of market participants' answers to the April consultation on CRE risks and recent market developments was published on the HCSF's website. Authorities are pursuing their work on possible macroprudential measures and plan to follow up with further communications as appropriate during 2016.

^① The HCSF is a collegiate authority, grouping the French ministry of finance, central bank, banking and insurance supervisor, financial markets authority, accounting agency and three qualified (external) persons. ^② Bank of France and ACPR (2015). ^③ See HCSF (2014).

Communication as a policy instrument: Sveriges Riksbank

As a non-regulatory central bank, Sveriges Riksbank does not dispose of macroprudential tools in its preventive financial stability work.^① It uses instead communication both in public and in dialogue with selected participants (moral suasion) to induce change in this policy area.

Experience has demonstrated that merely drawing attention to risks does not suffice. For example, already in 2005 the *Financial Stability Report* (FSR) sounded warnings regarding economic developments in the Baltic states, and the Riksbank raised the issue with relevant authorities and banks. Despite this, Swedish banks' exposures in the Baltic countries caused problems during the crisis.^② In order to make clear proposals for suitable measures to counteract risks, the Riksbank in 2010 began to publish recommendations in the FSR to try to more clearly induce change.^③ As regards promoting increased transparency by the major Swedish banks, the recommendations seem to have been a useful tool.^④ In several cases, banks began to act in accordance with them soon after they were issued.

When the framework for macroprudential policy was established in 2014, the microprudential supervisor (Finansinspektionen) was given the main responsibility for macroprudential policies in Sweden, including a set of bank-related policy instruments. The Riksbank retained responsibility for promoting financial stability. Though difficult to draw any conclusions on potential changes in the impact of the Riksbank's communications, casual observation of commercial banks' quarterly reports indicate that today firms make fewer references to the Riksbank's recommendations than during the years after they were introduced in 2010. However, recent bilateral meetings with banks indicate that foreign investors, for example, have good knowledge of the FSR messages and pose related questions to the banks. The FSR can thus still be seen as an important channel for moral suasion.

In 2006, the FSR stated, "The Riksbank notes once again that the rapid rate at which house prices and household debt are rising is not sustainable in the longer run." The Riksbank has since sharpened the tone regarding those risks in the FSR and other publications. Though being raised as a risk by international organisations at a rather early stage, not until the last few years has there been a growing consensus among stakeholders and in the debate in Sweden regarding risks with household debt, and some initiatives have been taken to introduce measures. The Riksbank may have contributed to the growing consensus and initiatives on measures through setting the agenda, and forcing others to discuss the risks and need for measures.

^① The Riksbank lends money to banks and certain other participants in the financial markets. The Riksbank can amend terms and conditions for collateral for these loans. ^② See eg Ingves (2010). ^③ See Sveriges Riksbank (2013). ^④ See Pettersson (2014).

future room for exit. Authorities may reach their audience more easily if they use clear, plain language to explain risks rather than allow their own uncertainty to be reflected in more complex, finely balanced wording. Examples of how risks, when they materialise, would affect a typical household's wealth might help attract attention. The authority might also be able to gain attention by framing the communication differently. For example, an authority concerned with high leverage among households and corporates might emphasise the positive aspects of lower leverage (eg more flexibility to change careers or work patterns, or the ability to respond more flexibly to changing markets and disruptive entrants) rather than the consequences of bankruptcy.

4.2.2 Reputation

Communication is likely to be more effective the greater the authority's reputation for good risk assessment. Conversely, the way the authority communicates determines how quickly it can build (or lose) reputation. This bidirectional interaction between reputation and communication presents a key challenge in using communication as an instrument in its own right.

Reputation capital is built gradually by the policy authority but can be fickle. There is no obvious indicator to help assess the success of the macroprudential authority in achieving its objective before risks materialise. Once they do materialise, however, having failed to raise sufficient risk awareness can have large reputational costs. By comparison, it seems easier to maintain a reputation for successful conduct of monetary policy because the link between outcomes and policy objectives is easier to establish and to explain on a regular basis. As mentioned above, succumbing to the temptation to avoid reputational damage through frequent warnings about risks (no matter how remote) may have only short-lived benefits in raising stakeholders' attention but comes at the cost of greater inattention in the future. Transparency about the risk monitoring process within the central bank might accelerate the build-up of reputation.³⁸

Other parts of the public sector might be able to strengthen the macroprudential authority's reputation. For example, the RBA frequently positively comments on actions by the prudential and market regulators.³⁹ The Bank of England sometimes communicates its endorsement for a workstream being taken forward by a European or international working group. Conversely, Box H describes potential changes in the impact of Sveriges Riksbank's communications after macroprudential powers had been allocated to the microprudential supervisor.

4.2.3 The macrofinancial environment

The impact of official communication about risks on private sector behaviour is not independent of the economic context. Early in the credit cycle, the response to official warnings tends to be weaker. Warnings are likely to be perceived as relating to low-probability events, and investors are unwilling to give up strategies that proved profitable during the boom. In contrast, communication about risk has greater impact late in the credit cycle, when there is a widespread perception that risks already are elevated, and in particular in times of manifested stress. Creditors' claims become sensitive to changes in the likelihood of debtors' insolvency, and investors are more likely to herd.⁴⁰ In such conditions, investors not only infer what policymakers' communication implies for the intrinsic value of their investments, but they also use them to assess how other investors are likely to respond, thus attaching great importance to this single source of information.⁴¹ Authorities might respond by erring on the side of understating rather than overstating risks.

While announcements' impact on behaviour might be stronger when risks are elevated, the direction of the impact remains difficult to predict. If the macroprudential authority warns about increasing risks to financial stability, this could be taken as bad news and lead to these risks materialising. Alternatively, it could be interpreted as implying that cyclical regulatory requirements, such as the countercyclical capital buffer, are about to be loosened, which, by itself, should stabilise credit supply and support financial stability. This ambivalence about the direction of the impact does not, however, mean that it is unequivocally better to publish less information in such situations. Withholding information that is typically

³⁸ For an example, see eg Chan et al (2005).

³⁹ See eg Ellis (2014).

⁴⁰ In the academic literature, the information sensitivity of the value of securities has been discussed by Dang et al (2015). See Hirshleifer and Teoh (2003) for an overview on informational cascades.

⁴¹ Morris and Shin (2002) discuss the link between the weight investors attach to public announcements and the strategic environment in which they operate.

published may in itself be interpreted as bad news and prolong uncertainty about how bad things really are.

4.3 Assessing the impact of communication

When communication is used as an instrument in its own right, its effectiveness should also be constantly assessed. This section provides a brief overview of the methods central banks have used to track the impact of communication on behaviour and the results obtained.

A number of econometric studies have shown that financial market prices respond to financial stability-related central bank communication. More often than not, communication moves equity prices into the direction consistent with the direction of the risk assessment – ie when the central bank publishes negative views equity valuations decline relative to a pricing benchmark.⁴² What is not clear from these studies is whether communication also affects risk-taking and financial stability. In addition, there are a number of statistical issues with this type of exercise. For instance, it is difficult to know how to separate the impact of new information about risks from a reaction to the likely deployment of prudential tools, or how to select the relevant announcement date since risk assessments may change gradually and key stakeholders may be consulted ahead of forthcoming policy changes. Case studies are an alternative assessment technique that comes at the cost of greater challenges in separating out the impact of contemporaneous changes in the regulatory and economic environment.

Many authorities use tools to measure their overall reputation among key stakeholders and the reception of key publications. Some are largely automated, providing results very soon after a publication or an announcement. The methods the RBA uses to evaluate the impact of its publications are a case in point (Box I). The impact on decision-making or risk-taking can also be assessed in discussions with decision-makers in financial markets.

The Bank of England collects and tracks information about market participants' perceptions of systemic risks via a regular survey.⁴³ This is sent out twice a year to a range of market participants, and the results are aggregated and published by the Bank. The survey covers confidence in the stability of the UK financial system and aggregate risks, including the probability of a future high-impact event, as well as specific sources of risk, which could either have a particularly large impact or be especially challenging for firms to manage. The survey is arguably not able to gauge the effectiveness of a single communication given its comparatively low frequency, but could be used to assess the effectiveness of prolonged campaigns aimed at altering the perception of risks. In this regard, changes in the frequency with which respondents cite certain risks and the weight that respondents attach to a risk could be useful information.

Other measures of the effectiveness of communication are the extent to which the macroprudential authority's arguments are included in public enquiries, the

⁴² See eg Born et al (2011).

⁴³ See eg Bank of England (2015b).

extent to which these arguments are referred to in subsequent discussions and the strength of the consensus that builds around the authority's position. For example, in 2013 the RBA achieved a considerable increase in public focus on the risks involved in leveraged investments in property by "self-managed" pension (superannuation) funds.⁴⁴ A subsequent government inquiry recommended that the government ban this type of borrowing by superannuation funds, broadly in line with the Bank's view, although this position was not adopted by the government.⁴⁵

Box I

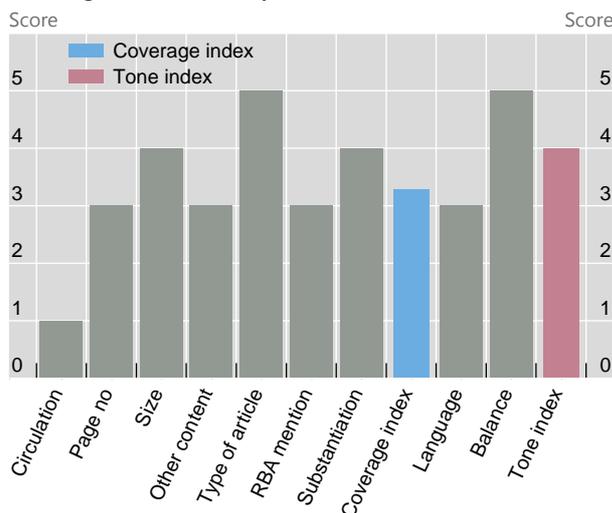
Measuring the impact of press coverage of the Reserve Bank of Australia

The RBA has developed a media evaluation tool that measures the impact of specific media outcomes by two broad indicators: "coverage" and "tone". The tool assigns to each media outcome numerical scores for various factors that reflect either coverage or tone, and together these give an indication of an article's "impact". The indices can be used to evaluate media coverage by theme, paper, author and changes over time.

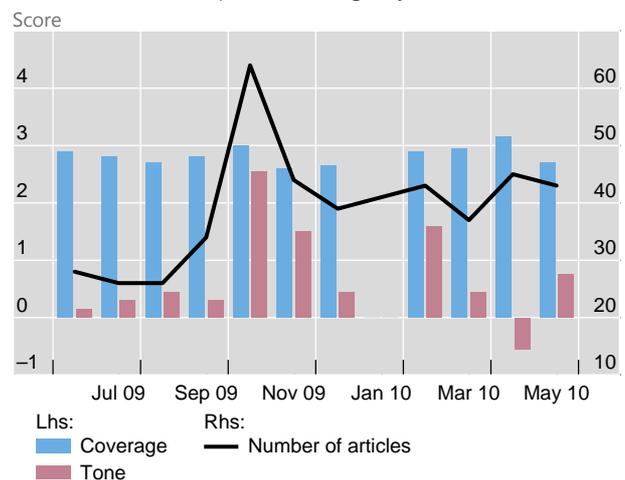
Factors considered for coverage analysis include the circulation of individual publications; the likelihood of being read, measured by where articles are placed within a publication; potential to influence; and perceived credibility of the author and type of article, such as feature or editorial. Factors considered for tone analysis includes measurement of the language (specific words used to distinguish between positive and negative language), and the "balance" of reporting demonstrated in the article.

The graph below illustrates how the tool can be used. The left-hand panel provides the score of an *Australian Financial Review* editorial following a RBA Board decision. The article provided a supportive view of the Bank's recent policy decisions and accurately reflected Bank commentary. The article scored between 1 and 5 on the coverage factors, to give a high overall coverage score of 3.6 (blue bar), and scored 3 and 5 on the tone factors, to give an overall highly favourable tone score of 4 (red bar). The right-hand panel tracks the impact of communication over time, showing 12 months of press coverage following a Board decision. Coverage and tone indices are graphed as blue and red bars, alongside additional information showing the total number of press articles on the topic (black line).

Coverage and tone analysis¹



Cash rate decision, press coverage by month



¹ *Australian Financial Review* editorial following the March board decision.

Source: RBA.

⁴⁴ See RBA (2013), Box D.

⁴⁵ Set out in RBA (2014).

4.4 Summary and key challenges

Compared with monetary policy, communication used as a macroprudential instrument in its own right could have a greater impact but also faces greater challenges. The impact could be greater because financial market participants are generally receptive to new information about risk: asymmetric information and coordination issues are intrinsic features of financial markets. Also, there is arguably a greater gap between the objectives and the available instruments in macroprudential compared to monetary policy. Communication could help narrow this gap because it can be targeted at very specific risks and groups of stakeholders and, in contrast to “hard” macroprudential instruments, does not require any specific transfer of powers to the authority.

The challenges are greater because the analytical paradigm for understanding financial stability is relatively weak and because behavioural responses to communication are very important. Precisely when financial stability will benefit from a risk warning (early in the credit cycle), the effect of the warning is likely to be weaker. And when the effect of the warning is likely to be large (late in the credit cycle), the responses of policy stakeholders can be unpredictable. The instability of the expectations channel when communication is particularly effective is sobering and calls for a more in-depth analysis of the conditions under which communication is likely to be a valuable policy instrument in its own right.

5. Jointly communicating macroprudential and monetary policy

Monetary and macroprudential policy both work to a significant degree by shaping economic agents’ expectations about the macrofinancial outlook. This suggests that each policy needs to take into account any side effects its actions may have on the objectives of the other. Box J presents an example of how both policies were used in a coordinated fashion in response to changes in the macrofinancial environment in India.

The links between the two policies raise the question of whether communication should be coordinated with cross-references between the two policy areas. A key consideration of the communication strategy in situations where monetary and macroprudential policies interact is to convey to stakeholders the link between actions and the respective objectives of policy. How much coordination in communicating policies is necessary depends on a number of factors, including the particular circumstances (since they influence the direction and intensity of interactions between policies) and whether policy measures are structural or cyclical in nature.

In general, the need to coordinate communication around decisions related to **structural macroprudential measures** is less pronounced. Such measures are taken with a view to affecting tail risks to financial stability, while any impact on the real economy and the business cycle is typically contained by a gradual phase-in of the new requirements. Box K provides an example where a structural policy measure

The Reserve Bank of India's experience with time-varying risk weights

Time-varying or cyclical tools have been used by the Reserve Bank of India (RBI) to target the build-up of risks related to cyclical fluctuations in the provision of credit, the interdependence across institutions and cross-border spillovers. The objective of macroprudential policy in India has been to build up the resilience of the banking system while containing sectoral exuberance. India witnessed average GDP growth of 9% from 2003–04 to 2007–08 accompanied by high credit expansion of 27% on average during this period. During this phase, the disaggregated average growth in credit for sectors such as commercial real estate (CRE) and the housing sector was very high, at more than 100% and 40%, respectively. This accelerated credit offtake was accompanied by a run-off in real estate prices.

Seeing emerging risks in this runaway credit growth, the RBI proactively adopted pre-emptive countercyclical policies of provisioning and differentiated risk weights for these sectors beginning in 2004. The timely use of such macroprudential policies helped India contain contagion from the global financial crisis and maintain financial stability despite a rise in stress. After the crisis unfolded, the RBI responded by unwinding some of the pre-crisis tightening measures.

During 2004–08, countercyclical policies were accompanied by monetary policy tightening. From October 2008 to April 2009, when the RBI relaxed its macroprudential measures, it also eased monetary policy. The stance reversed after October 2009, when inflationary pressures warranted monetary tightening while increased credit growth in some segments of the economy necessitated macroprudential tightening.

As regards communication, macroprudential policy is generally announced, as and when required, as part of the Monetary Policy Statement, which informs the public of the policy stance, incorporates new proposals on the banking regulation front and announces macroprudential measures. The macroprudential policy decision and the objective of the policy is also explained. The circular/direction issued to banks in connection with the policy statement are also posted on the RBI website. These are further analysed and discussed in various reports of the central bank, including its *Annual Report*, *Report on trend and progress of banking in India* and *Financial Stability Report*, which also provide an overview of active instruments.

primarily served to provide insurance against potential future increases in vulnerabilities, not presenting a need to coordinate communications of macroprudential and monetary policy. The reduction of the LTV cap on mortgages in the Netherlands over several years (Netherlands Bank (2015)) presents an example where gradual implementation minimises the need to coordinate policies. However, spreading out the impact may not always work if banks, or households, are front-running the regulation.

In contrast, **cyclical macroprudential measures** potentially have a stronger interaction with monetary policy objectives, thus presenting greater scope for communication coordination and cross-referencing. Circumstances when both policies complement each other by moving in the same direction are less problematic. For instance, the Bank of England's monetary and macroprudential easing package in the wake of the Brexit referendum included measures designed to affect the central path of the economy in the same direction: a release of the countercyclical capital buffer, a reduction in the policy rate and an expansion of the central bank's asset purchase programmes. While each instrument was separately justified with respect to the policy's objectives, the communication explained how both policies would reinforce each other in stimulating aggregate demand.⁴⁶

⁴⁶ See Bank of England (2016).

The communication becomes more challenging when policy tools are moved in opposite directions. In this case, authorities need to clarify to what degree policies, set to meet their primary objective, accept that they impact the objectives of the other policy. For instance, in 2013 the Bank of England offered guidance that it intended to maintain a highly accommodative stance of monetary policy until economic slack had been substantially reduced. Recognising the financial stability risks from a commitment to maintain low interest rates, it stated that the stance would be reconsidered if it posed a significant threat to financial stability that could not be contained by the combination of micro- and macroprudential policy tools.⁴⁷

A situation where policies may need to pull in opposite directions could arise during a credit boom in the context of low inflation, as was the case in many advanced economies in the first half of the previous decade. In this situation, institutional arrangements may play a role in how easily the communication between policies can be coordinated, for two reasons.

Box K

The Financial Policy Committee's June 2014 action in the owner-occupier housing market in the United Kingdom

In June 2014, the Financial Policy Committee (FPC) of the Bank of England took action to address a build-up of risk in the UK owner-occupier housing market. The FPC used its statutory powers to recommend that mortgage lenders should not extend more than 15% of their total number of new residential mortgages at loan-to-income (LTI) ratios at or greater than 4.5.^①

The FPC's action was framed in terms of avoiding an excessive build-up in the level of household indebtedness in the United Kingdom, and in particular an increase in number of heavily indebted households. The motivation for this action was the risk that heavily indebted households might cut their spending significantly in the event of an adverse shock, with potential knock-on consequences for the wider economy. This links to the FPC's primary objective, which is to identify, monitor, and take action to remove or reduce, systemic risks with a view to protecting and enhancing the resilience of the UK financial system, including systemic risks associated with unsustainable levels of leverage, debt or credit growth.^② The action was not directly framed in terms of bolstering banks' resilience to credit losses; other tools were available to the FPC for that purpose – for example, the stress testing framework and the countercyclical capital buffer.

The actions were communicated via the June 2014 *Financial Stability Report* and at the accompanying press conference. In its communication strategy, the FPC emphasised that household indebtedness did not pose an imminent risk to financial stability and that these actions were intended to provide insurance against the possibility that conditions in the housing market became exuberant. Prior to that, the narrative had already been built up over previous quarters. For example, the risk of rising house prices was flagged in the November 2013 *Financial Stability Report*; the Record of the FPC's March 2014 meeting noted "continued evidence of increasing momentum in the UK housing market"; and the Bank's Deputy Governor for Financial Stability, Sir Jon Cunliffe, said in a May 2014 speech that "growing momentum in the [housing] market is now in my view the brightest light on the dashboard". As a result, the FPC's actions were widely expected by June 2014; indeed, some institutions had themselves begun imposing voluntary limits on LTI ratios. The action was generally favourably reported in the press.

^① The FPC also recommended that when conducting mortgage affordability stress tests, lenders should ensure that new loans would still be affordable if rates rose by 3% above the rate prevailing at origination, for the first five years of the loan. For simplicity, this case study focuses only on the LTI measure. ^② See HM Treasury (2016) for the FPC's remit.

⁴⁷ See Bank of England (2013). See eg IMF (2013) for a discussion of the interactions of monetary and macroprudential policies.

The first relates to the ease with which a consistent narrative justifying the policy mix can be constructed. If monetary and macroprudential policies are assigned to different authorities, and if authorities do not share the same assessment of the shocks that hit the economy or of the transmission channel of each policy, a good working relationship between the authorities and a willingness to acknowledge and explain differences in views are important to avoid sending confusing signals to the public. If the central bank takes the lead in formulating macroprudential policy, it might find it easier to build a consistent narrative for explaining how monetary and macroprudential policies interact and why a specific policy mix has been chosen. That said, even if the central bank is the macroprudential authority, a uniform communication strategy may not be easy to design, for example if members of the committees deciding on macroprudential and monetary policy disagree on the optimal policy mix, and if these differences, in order to increase transparency and accountability, are reflected in their speeches or the minutes of policy committee meetings.

The second reason why institutional arrangements may matter is relevant if the central bank believes that prudential policy is not sufficiently effective in mitigating financial imbalances, potentially providing a reason for monetary policy to take financial stability considerations into account. Box L discusses the Riksbank's experience with communicating the link between monetary and financial stability policy since 2010.

In the case of monetary policy frameworks anchored on an exchange rate target, similar problems arise, although the communication effort typically needs to address different issues. The monetary policy stance is easy to explain. Macroprudential policy decisions can be justified in terms of addressing financial stability risks taking the setting of monetary policy as given. That said, when macroprudential policy measures appear restrictive, the public debate might quickly turn to questioning whether the monetary policy framework itself is appropriate. Box M provides an example of the resulting communication challenges in Hong Kong and the lessons drawn by the HKMA.

Finally, notice that not only the coordination of macroprudential with monetary policy, but that with microprudential policy, can give rise to challenges. For example, a situation in which the countercyclical capital buffer is likely to be released could be the onset of a financial crisis. In this situation, a strictly microprudential view might suggest that banks should strengthen their buffers, not release them.

Sveriges Riksbank's experience with communicating the link between monetary and financial stability policy since 2010.

Having lowered its key policy rate to 0.25% during the 2007–09 financial crisis, the Riksbank started to tighten monetary policy in June 2010. These increases were mainly governed by traditional monetary policy motives, referring to the actual and expected development of economic activity and inflation and in line with the common perception at the time. That said, there were also considerations to macroeconomic and financial stability risks from growing household debt, but this played only a minor role in the monetary policy assessment.

A couple of months prior to the first interest rate increase, the Riksbank explained the objectives of monetary policy in a standalone document.^① The publication explained that monetary policy may act to complement effective regulation and supervision to prevent an overly rapid increase in asset prices and indebtedness in an attempt to avoid large asset price adjustments in the future, which could have unfavourable and serious repercussions on the real economy and inflation.

The communication around the subsequent interest rate increases (eg press conferences and speeches) referred to financial stability-related reasons for tighter monetary policy only at the margins: for example, the press release following the June 2010 repo rate increase referred to a significant increase in household debt as “another factor” in justifying a gradual increase in the report rate. This reflected that concerns regarding growth and inflation, and those related to financial stability, both pointed towards tighter monetary policy, facilitating the communication of the increase in the policy rate. Executive Board members' different views on whether financial stability concerns might provide an additional argument for raising the policy rate were reflected both in their speeches and in the minutes of the policy meetings.^②

The policy rate peaked at 2% in July 2011. From December 2011 onwards, it gradually declined again, ultimately to –0.5% in February 2015. This followed initially the assessment that the outlook for the domestic economy had deteriorated following the euro area sovereign debt crisis, and later inflation falling well below target. The press releases accompanying the initial reductions in the repo rate focused on the growth and inflation outlook for the Swedish economy. At the same time, household debt remained persistently high. Arguably, concerns regarding growth and inflation, and those related to financial stability, now pointed to different monetary policy responses. Had the Riksbank been less concerned about the development of household debt, the policy rate would probably have been cut at a faster rate.

The Riksbank's December 2013 press release, which followed the decision to cut the policy rate to 0.75%, pointed out that “households' high indebtedness remains a risk to sustainable long-run development. Several policy areas need to cooperate to manage these risks”. (In autumn 2013, the government had announced that it would assign the responsibility for macroprudential policy to the microprudential supervisor, Finansinspektionen.) Press releases accompanying subsequent reductions in interest rates more forcefully called for the need for cooperation. For example, following the cut in the policy rate to 0.25% in 2014, the press release stated: “A low repo rate makes it more urgent for other policy areas to manage the risks linked to household indebtedness and to developments on the housing market. [...] If no further measures are taken, there is a greater risk that the economy will develop in a manner that is not sustainable in the long run, which could also make the conditions for monetary policy more difficult further ahead.”^③

^① Sveriges Riksbank (2010a). ^② See eg Sveriges Riksbank (2010b) and Svensson (2010). ^③ Sveriges Riksbank (2014).

Hong Kong SAR's experience in communicating macroprudential and monetary policies

Hong Kong has set monetary policy to ensure a stable exchange rate between the Hong Kong dollar and the US dollar since 1983. Macroprudential policy has been crucial for dealing with economic shocks in this context. This box provides a recent example and describes how monetary and macroprudential policies were communicated in 2010-13 and what lessons the HKMA drew from that experience.

For instance, against the background of very low global interest rates, domestic imbalances built up significantly during 2010-13. Residential property prices and rents rose sharply despite progressive tightening of macroprudential policy. Some commentators suggested that the monetary policy regime – the Linked Exchange Rate System (LERS) – had exacerbated asset price bubbles in Hong Kong. The property-related macroprudential measures were perceived by some as failing to contain residential property prices, reducing market liquidity, and impeding home ownership.

The HKMA strengthened its communication with the public in response. In particular, it aimed to clarify the objectives and limits of the LERS, remove market uncertainties about the LERS, and reinforce public confidence in the regime. There was also a need to clarify the objectives of property-related macroprudential measures, highlight the efforts to minimise impact on acquisition of self-used property, and provide some guidance on possible future policy changes.

To ensure that these messages would be delivered effectively, the HKMA formed a communication team from several of its departments and tasked it with collecting and analysing opinions on the LERS and macroprudential policy, formulating and implementing the communication strategy, monitoring feedback from the public and, if necessary, modifying the communication strategy. The messages were delivered either through ad hoc channels such as press briefings, interviews and special articles published on the HKMA website, or regular channels such as the quarterly briefing to the legislature and periodic publications.

The experience suggests a number of lessons. First, it is important to clarify, for each policy, its respective objectives and limits. The HKMA has made it clear to the public that the LERS is the best feasible option for Hong Kong over the long run despite occasional short-term cost, and that HKMA's macroprudential policy only aims at improving banks' resilience and containing leverage but not controlling property prices. Second, public opinions have to be constantly monitored and addressed. In particular, the HKMA explains regularly why it has no intention to change the LERS and clarifies the objectives of its macroprudential measures at every different stages of the property cycle. Third, the public needs to be constantly reminded of how future shocks might affect them. The HKMA has explained through various channels how the LERS will work when global interest rates increase and capital flows out of Hong Kong. It also frequently reminds potential property buyers of the risk of high leverage and how interest rate hike will affect their debt servicing.

6. Conclusion and policy messages

Clear policy objectives and targeted communication strategies are essential ingredients of a macroprudential policy framework. The previous sections suggest that policy frameworks developed for monetary policy provide a useful benchmark for macroprudential policy. This includes granting the policymaker a substantive degree of discretion when calibrating instruments, while balancing this power with requirements regarding the transparency of decision-making and the process by which policy is developed.

However, macroprudential policy has important characteristics that differ from those of monetary policy. Monetary policy frameworks therefore cannot be adopted without modification. In particular, macroprudential policy has salient distributional effects and can significantly constrain the decisions of market participants. This puts it closer to the realm of microprudential policy, and suggests that an even greater

emphasis needs to be placed on communication to ensure that the public understands what financial stability means, why it matters and why certain instruments help achieve it. None of this is easy because the financial stability objective has several facets and is therefore more difficult to define and measure than price stability; and because analytical frameworks are less developed and data less easily available and shared than in monetary policy.

The following key messages can be drawn from the analysis.

First, in some respects, macroprudential policy finds itself in the same situation as monetary policy a few decades ago when central banks began developing frameworks for making the formulation of monetary policy more transparent and accountable. Designing a similarly **“systematic” policy framework** is an important consideration for macroprudential policy but is not easy at this point.

Second, relative to monetary policy, macroprudential authorities need to spend more time explaining the policy framework. This can help generate a **high degree of appreciation across society for the need to maintain financial stability**, itself important for the effectiveness of macroprudential policy because it facilitates early tightening of policy when risks are not yet elevated.

Third, setting **intermediate objectives** for financial stability – if regularly reviewed to ensure their continued relevance – can be an important element of a systematic framework but may also have disadvantages. Intermediate objectives can facilitate the coordination between different policymakers responsible for financial stability and may also help counteract inaction bias. That said, referring to aspects of financial stability, or stepping stones of the transmission process of macroprudential instruments, as intermediate objectives may also have disadvantages. They may be easier to achieve but they may not lead cumulatively to achieving the overall objective. As our knowledge about the transmission channel improves, the importance of intermediate objectives may decline, as the weight placed on credit and money growth targets declined for inflation targeting central banks.

Fourth, compared to monetary policy, using **communication as an instrument in its own right** by publishing risk assessments without explicitly referring to potential policy actions could have a greater impact but also faces greater challenges. Early in the credit cycle, the effect of such warnings on risk-taking is likely to be small because stakeholders are more inclined to continue employing strategies that, so far, have proven profitable. Their effect is larger late in the credit cycle, when there already is a widespread perception that risks are elevated. However, in this case economic agents are also likely to adjust their behaviour more abruptly, making it difficult to predict whether the warning will enhance or damage financial stability in the short run.

Communication would therefore appear to be easier to control, and hence a more useful instrument in its own right, if warnings attracted more attention before risks became elevated. If the behaviour of a small set of institutions gives rise to concerns, soliciting their managers’ or shareholders’ feedback on risk analyses could help. If the risk arises in the household sector, framing risks such that they become personal and concrete, and emphasising the benefits of lower exposure to risk rather than the costs of risks materialising, might also raise attention. As the authority gains certainty on the relevance of the risk for financial stability, it might be appropriate to strengthen its warnings and to increase their frequency to reduce the reputational risks that arise from issuing too many, or too few, warnings.

Fifth, communication about risks does not have to be less **transparent** when risks are elevated. Withholding information that is typically published may in itself be interpreted as bad news and prolong uncertainty about how bad things really are. Instead, the communication strategy could benefit from being designed to increase an authority's reputation for predictable, consistent policymaking. To that purpose, it could be useful to define a set of risk indicators that can be published independently of whether risks are elevated, and to identify a concise description of financial-system vulnerabilities that facilitates comparison over time despite being more qualitative in nature.

Finally, the smaller the impact of macroprudential policy measures is on the central path of the economy, as opposed to tail risks to financial stability, the easier it is to separate the **communication of macroprudential and monetary policy**. If the macroprudential policy measure affects the central path of the economy, challenges arise if policies move the central path into different directions. In this case, for policymaker communication to be useful, it would likely need to focus on the objectives of each policy, on the reasons for policymakers having assigned these objectives, and on how the policy action is likely to contribute to achieving them.

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7. Annex

Tables

| Interpretations of the financial stability objective | | | Table 1 |
|--|---|---|---|
| | Macroprudential authorities | Financial stability objective | Emphasis on... |
| Australia | Central bank (RBA), supervisor/resolution authority (APRA) | RBA: Reducing – but realistically not eliminating – the risk of a disruption in the financial system so severe that it materially harms the real economy.⑥ APRA: A low incidence of failure of regulated institutions.① | Building resilience |
| Belgium | Central bank/supervisor/resolution authority (National Bank of Belgium (NBB)) | (1) Curbing the emergence of systemic vulnerabilities in upward phases of the cycle; (2) managing fundamental systemic risks stemming from vulnerabilities such as tight interconnectedness between financial intermediaries, high concentration of exposures of these institutions and the crucial role they play in significant markets.② | Building resilience (CCyB) |
| Canada | Senior Advisory Committee (SAC). Led by Department of Finance; includes central bank, supervisory (OSIF) / resolution (CDIC) authorities, and consumer agency (FCAC). | No explicit financial stability mandates. However, financial stability considerations are present in some of the agency's mandates. For example, OSFI as microprudential supervisor also monitors and evaluates system-wide or sectoral conditions that may have a negative impact on the financial condition of financial institutions; the Bank of Canada (BoC) has formal responsibility for the oversight of clearing and settlement systems for the purpose of controlling systemic risk; CDIC has an explicit statutory mandate to promote and otherwise contribute to the stability of the financial system. | Building resilience |
| France | Committee (HCSF). Includes central bank (BdF), supervisor/resolution authority (ACPR), market regulator (AMF), government, accountancy body (ANC). | Safeguarding financial stability, ie “a condition whereby financial resources and risks are efficiently allocated, in such a way as to limit the financial and, above all, macroeconomic impact of adverse financial events (unexpected events, stresses or structural adjustments)”.③ | Building resilience |
| Hong Kong SAR | Central bank/supervisor (HKMA) | Promote the stability and integrity of the financial system, including the banking system. | Building resilience (in particular of the banking system) |

| | Macroprudential authorities | Financial stability objective | Emphasis on... |
|-------------|---|---|---|
| India | Financial Stability Development Council (FSDC), government, Reserve Bank of India (RBI), Securities and Exchange Board of India, Pension Fund Regulatory and Development Authority, Insurance Regulatory and Development Authority, National Housing Bank | <p>The FSDC has the mandate for macroprudential supervision of the economy, including large financial conglomerates, and addresses inter-regulatory coordination and financial sector development issues. The FSDC subcommittee under the chairmanship of the Governor of the RBI is a forum for enhancing inter-agency coordination for financial stability.</p> <p>The RBI has a legal mandate to secure monetary stability, but since 2004 has voluntarily included financial stability as an additional objective in view of its contribution to the conduct of monetary policy and to price stability in the largely bank-based Indian financial system.</p> <p>Regulatory policy is conducted by individual regulatory authorities.</p> | Building resilience |
| Italy | Central bank/supervisor/resolution authority (Bank of Italy (BdI)) | Ensuring the proper functioning of the financial system so that it allows households, firms, general government entities and other economic agents to make payments, transfer resources and manage risks. | Building resilience |
| Japan | Central bank (Bank of Japan (BoJ)), supervisor/resolution authority (Financial Services Agency (FSA)) | <p>BoJ: to contribute to achieving sustainable economic growth by ensuring stability in prices and the financial system.</p> <p>FSA: implements macroprudential policy in charge of inspections and supervision of regulated financial institutions.</p> | Building resilience. For CCyB, also leaning against the cycle |
| Luxembourg | Supervisor/resolution authority (Commission de Surveillance du Secteur Financier (CSSF)), in conjunction with the Central Bank of Luxembourg (BCL) and the Systemic Risk Committee, in which the insurance regulator (CAA) and the government participate | To contribute to the stability of the Luxembourg financial system, notably by reinforcing its resilience and by diminishing the build-up of systemic risk, so as to insure a sustainable contribution of the financial system to economic growth. | Building resilience |
| Netherlands | Central bank/supervisor/resolution authority (Netherlands Bank (DNB)) | To enhance the overall resilience of the financial system and to counteract excessive financial developments, thereby reducing the likelihood and the impact of financial crises. | Building resilience |
| Spain | Central bank/supervisor (Bank of Spain) ^④ | To ensure the proper functioning of the financial system, so that it can perform its vital role as intermediary between savings and investment and channels these resources efficiently to promote economic growth. | Building resilience / leaning against the cycle |

| | Macroprudential authorities | Financial stability objective | Emphasis on... |
|--|--|--|--|
| Sweden | Supervisor (Finansinspektionen) | To ensure that the financial system is stable and characterised by a high level of confidence and has smoothly functioning markets that meet the needs of households and corporations for financial services. To counteract financial imbalances with a view to stabilising credit markets. ^⑤ | Building resilience / leaning against the cycle |
| Switzerland | Central bank (Swiss National Bank (SNB)), supervisor/resolution authority (FINMA), government (Swiss Federal Council) | The preservation or restoration of the stability of the financial system. ^⑥ | Building resilience / leaning against the cycle ^⑦ |
| UK | Central bank/supervisor/resolution authority (Bank of England (BoE)) | To protect and enhance the stability of the financial system of the United Kingdom. | Building resilience |
| US | Central bank/supervisor (Federal Reserve Board (FRB)), deposit insurer/supervisor/resolution authority (Federal Deposit Insurance Corporation (FDIC)), US Treasury, committee (Financial Supervisor Oversight Council (FSOC)) ^⑧ | FRB: reducing the risk of financial disruptions that are sufficiently severe to inflict significant damage on the broader economy. ^⑨ | Building resilience / leaning against the cycle ^⑩ |
| Euro area (Single Supervisory Mechanism (SSM) countries) | Central bank/supervisor (ECB) | To strengthen the resilience of the financial system and limit the build-up of vulnerabilities, in order to mitigate systemic risk and ensure the ongoing effective provision of financial services to the real economy. | Building resilience / leaning against the cycle |

④ RBA (2014). ① APRA (2014). ② NBB (2015), p 13. ③ Haut Conseil de stabilité financière (2014). ④ The Bank of Spain is also involved in pre-emptive work regarding resolution. The executive resolution authority that manages the restructuring and resolution processes of credit institutions is the Fund for Ordered Bank Restructuring (FROB). ⑤ Finansinspektionen (2014). ⑥ The overall objective of Swiss macroprudential policy is to preserve or restore the stability of the financial system. As regards the financial stability objective (table heading), the SNB and FINMA have different objectives: one of the SNB's tasks is to contribute to the stability of the financial system. This contribution is made in the context of the SNB's monetary and foreign exchange policy. The preservation of financial stability is specifically referred to in Article 19 para 1 of the Swiss National Banking Act, which entrusts to the SNB the task of monitoring the payment and clearing systems. FINMA contributes to the overall financial stability objective by ensuring the solvency and stability of individually supervised institutions and thereby protecting the functioning of the financial markets. The Swiss government is also involved in macroprudential policy (it takes the final decision in setting the CCyB) but does not have a financial stability mandate. ⑦ The CCyB aims to lean against the cycle; other instruments may not. ⑧ The above-listed government agencies are those with express financial stability mandates as reflected in various macroprudential authorities granted to them by the Dodd-Frank Act. For the FRB, these include (among other authorities) expanded supervisory authority over large bank holding companies and non-bank financial companies that FSOC has determined to be under heightened supervision and the authority to impose more stringent supervisory standards on these companies. For the FDIC, this primarily includes certain powers related to Orderly Liquidation Authority under Title II of the Dodd-Frank Act. For the Treasury, this reflects the Treasury Secretary's determination of when a financial company should be placed in receivership under Title II of the Dodd-Frank Act. For the FSOC, this primarily includes the authority to evaluate and identify non-bank financial companies that will be under heightened supervision by the FRB. ⑨ This objective of macroprudential policy was articulated in Yellen (2011). ⑩ Building resilience" and "leaning against the cycle" were both mentioned as objectives of macroprudential policy tools in Yellen (2014).

Overall objectives of authorities involved in macroprudential policy or authorities of national financial stability councils

Authorities with a macroprudential policy function are indicated with an asterisk (*)

Table 2

| | Financial stability | Safety of financial institutions ^① | Economic growth / max employment | Efficiency / competition in financial markets | Consumer protection | Price / exchange rate stability |
|----------------------|--|--|---|---|---|---|
| Australia | APRA* (banking and insurance supervisor: financial stability) and ASIC (corporate, markets and financial services regulator: systemic risk in payment systems) RBA (financial stability and safe, efficient and competitive payment system) | APRA* (banks, insurance), ASIC (banks, investment firms and funds) | RBA (full employment, prosperity) | APRA*, ASIC | ASIC | RBA (stability of currency, inflation target) |
| Belgium ^② | NBB* (financial stability) | NBB* (banks, insurance, market infrastructure) | | | FSMA (Financial Services and Markets Authority) | Via Eurosystem (price stability) |
| Canada | Minister of Finance* (financial sector legislation and regulation); OSFI* (banking and insurance supervisor); BoC* ^③ (financial stability) | OSFI* (banking and insurance supervisor) | BoC* (to promote economic and financial welfare) | Minister of Finance* | FCAC | BoC* (price stability) |
| France ^② | High Council for Financial Stability (HCSF)* (includes Treasury, central bank, banking and insurance supervisor (ACPR)*, financial markets supervisor, accountancy body): financial stability | Bank of France and ACPR* (banks, insurance, investment firms and funds, market infrastructure), AMF (investment firms and funds) | HCSF* (sustainable contribution of the financial sector to economic growth) | | | Via Eurosystem |

| | Financial stability | Safety of financial institutions ^① | Economic growth / max employment | Efficiency / competition in financial markets | Consumer protection | Price / exchange rate stability |
|--------------------|---|---|----------------------------------|--|--|---|
| Hong Kong SAR | HKMA* (stability of the banking system and financial infrastructure, integrity of the financial system) Securities & Futures Commission (SFC) (reduce systemic risks in the securities and finance industry, maintain financial stability in the context of the securities and finance industry) Office of the Commissioner of Insurance (OCI) (promote general stability of the insurance industry) ^④ | HKMA* (banks) SFC (securities companies, FMIs, investment firms and funds) OCI (insurers) | | HKMA* (efficiency and development of financial system) SFC (maintain fairness, efficiency, competitiveness, transparency and orderliness of the securities and finance industry) | HKMA* (promote and encourage proper standards of conduct and sound and prudent business practices amongst banks) SFC (protect the investing public) OCI (protect existing and potential insurance policyholders) | HKMA* (exchange rate stability) |
| India | RBI (to mitigate systemic risk arising in banking and non-banking finance companies, primary dealers, payment and settlement systems) | RBI (banking and non-banking finance companies, payment and settlement systems) | RBI (growth) | RBI (including government securities market and money markets; foreign exchange markets; certain derivative markets) Securities and Exchange Board of India (SEBI) (market conduct regulator) Competition Council of India (fair, competitive, and innovative markets) | RBI (Bank customers) SEBI (investors) Insurance Regulatory and Development Authority (insurance customers) | RBI (price stability; promote orderly development and maintenance of foreign exchange market) |
| Italy ^② | BdI* (financial stability) ^⑤ Consob (securities market) and Ivass (insurance companies) also have responsibilities for financial stability | BdI* (banks, investment firms and funds) | | BdI* (money market and payments system) Consob (stock market) | BdI* (bank depositors) Consob (other securities) | Via Eurosystem |

| | Financial stability | Safety of financial institutions ^① | Economic growth / max employment | Efficiency / competition in financial markets | Consumer protection | Price / exchange rate stability |
|--------------------------|---|--|---|--|--|---------------------------------|
| Japan | BoJ* (financial stability) FSA* (financial stability) ^⑥ | BoJ* (banks, securities companies, FMIs) FSA* (banks, securities companies, FMIs, insurers, investment firms and funds) | BoJ* (contribute to the sound development of the national economy) | BoJ* (ensure smooth settlement of funds among banks and other financial institutions) | FSA* (protect deposit holders, insurance policyholders, negotiable securities investors and other similar parties) | BoJ* (price stability) |
| Luxembourg ^② | Systemic Risk Committee* (financial stability), which includes the BCL | CSSF (financial institutions and markets) BCL (supervision of liquidity risk of market operators; oversight of payments and settlement infrastructures) | Systemic Risk Committee* (ensuring a sustainable contribution of the financial system to economic growth) | | CSSF | Via Eurosystem |
| Netherlands ^② | DNB* (financial stability) | DNB* (banks, insurers, investment firms and funds) | | Authority Financial Markets (AFM) | | Via Eurosystem |
| Spain ^② | Bank of Spain* (financial stability) | Bank of Spain* (banks) | | | | Via Eurosystem |
| Sweden | Finansinspektionen* (financial stability) Riksbank (safe and efficient payments system, hence financial stability) | Finansinspektionen* (banks, insurers, investment firms and funds, market infrastructure) | Finansinspektionen* (sustainable contribution of the financial sector to economic growth) | Finansinspektionen* (supervisor) | Finansinspektionen* (supervisor) | Riksbank (price stability) |
| Switzerland | SNB* (financial stability) FINMA* (supervisor; stability of financial markets) ^⑦ | FINMA* (banks, insurers, investment firms and funds) | | FINMA* (supervisor; enhance the competitiveness and reputation of the Swiss financial marketplace) | | SNB* (price stability) |

| | Financial stability | Safety of financial institutions ^① | Economic growth / max employment | Efficiency / competition in financial markets | Consumer protection | Price / exchange rate stability |
|-----------------|---|---|--|---|--|-------------------------------------|
| UK ^② | BoE* (financial stability) | BoE* (banks, insurers, investment firms and funds, market infrastructure); Financial Conduct Authority (asset managers, financial advisers and mortgage and insurance brokers) | BoE* (growth) | Financial Conduct Authority (supervisor); Prudential Regulation Authority (supervisor); Competition and Markets Authority | Financial Conduct Authority | BoE* (price stability) |
| US | Federal Reserve System (financial stability), FDIC (financial stability), FSOC (financial stability) ^⑧ | FRB, FDIC, Office of the Comptroller of the Currency, National Credit Union Administration (all types of depository institutions), state insurance commissioners (insurers), Federal Housing Finance Agency (FHFA) (housing government-sponsored enterprises) | FOMC (maximum employment) ^⑨ | FRB (review of banking acquisitions and certain nonbanking activities) Securities and Exchange Commission (protect investors, maintain fair, orderly and efficient markets) Commodity Futures Trading Commission (protect market users and foster open, transparent, competitive and financially sound markets) | Consumer Financial Protection Bureau (markets for consumer financial products and services that are fair, transparent and competitive) Banking agencies (supervisory role with respect to smaller institutions) | FOMC (price stability) ^⑩ |

① The entries distinguish only a certain types of institutions: banks (deposit-taking institutions), insurers, investment firms and funds, and market infrastructure. Authorities may have responsibilities for additional institutions. ② Concurrent responsibilities within the ESFS and, with the exception of the UK, within the SSM. ③ The BoC does not have an explicit statutory mandate for promoting financial stability, although through the powers outlined in the Bank of Canada Act, it contributes to the stability and efficiency of the Canadian financial system by providing lender of last resort liquidity. In addition, through the Payment, Clearing and Settlement Act, it designates and oversees systemic domestic payment, clearing and settlement systems. It also has the unique capacity to carry out vulnerability assessments that take on a macro or a system-wide perspective. ④ Coordinated through the Council of Financial Regulators chaired by the Financial Secretary, and through the Financial Stability Committee chaired by the Secretary for Financial Services and the Treasury. ⑤ Main body. A proposal for the establishment of a Macroprudential Committee gathering all supervisory authorities and chaired by the Bank of Italy is under discussion in Parliament. ⑥ The BoJ and FSA cooperate when implementing macroprudential policy. ⑦ Macroprudential policy has not been explicitly assigned to an authority. Technically, the Swiss Federal Council is also involved in macroprudential policy. For the introduction of new regulatory measures, the Federal Council and, in certain situations, the parliament decide whether new macroprudential measures will be introduced through either a change in the ordinance or the law. Moreover, the Federal Council has the final say in setting the CCyB. ⑧ Macroprudential policy has not been explicitly assigned to a single authority. FSOC facilitates macroprudential policy coordination. ⑨ The FOMC is the decision-making body of the Federal Reserve System comprised of the Board of Governors and regional bank presidents.

Intermediate objectives and their characteristics

Table 3

| | Intermediate objectives | Defined when? ① | Achievement to be measured by...② | Process for revising intermediate objectives |
|---|--|--|---|--|
| Australia | Supervisory measures, Dec 2014: purpose is to ensure robust lending standards in the domestic mortgage market | The purposes of each macroprudential action are explained when it is implemented | A number of indicators, including two that were quantified when policy was announced: annual growth in share of investor housing loans; and interest rate buffer when assessing borrower's ability to service loans | None specifically; however the financial system and its regulatory architecture are reviewed about every 15 years. |
| Belgium, France, Italy, Luxembourg, Netherlands, Spain (following ESRB recommendations) | See Box E, Table A | When macroprudential policy framework was defined | Not covered (in part because not all instruments have been deployed) | ESRB has recommended regular revisions. National authorities have not published revision processes. |
| Hong Kong SAR | For property-related measures: to ensure banks (i) continue to adopt prudent risk management standards and practices during property market booms and avoid erosion of such prudent standards and practices by competitive pressures; and (ii) set aside adequate countercyclical cushions for absorbing potential losses in stressful times. For CCyB: provide a measure of protection to the banking sector against the build-up of system-wide risk associated with periods of excessive aggregate credit growth. Intended to be released at an appropriate time in order to mitigate the negative impact when the credit cycle shifts from an expansion to a contraction stage. | CCyB: purposes were explained when the policy framework for the CCyB was implemented | Not covered | No |
| Japan | For G-SIB/D-SIB surcharge, CCyB: to strengthen banking organisations' resilience and to reduce fluctuations in the supply of credit. | The purposes of each macroprudential action are explained when it is implemented. | Not covered | No |

| | Intermediate objectives | Defined when? ① | Achievement to be measured by...② | Process for revising intermediate objectives |
|-------------|--|---|---|---|
| Sweden | Key vulnerabilities (corresponding to underlying market failures and the specific structural characteristics in Sweden) serve as intermediate objectives for the FSA. These vulnerabilities are currently household indebtedness, banks' reliance on wholesale funding and the interconnectedness of the financial system with the associated risk of contagion. | Key vulnerabilities are monitored and identified on a continuous basis. The purposes of each macroprudential action are explained when it is implemented. | Set of indicators which signal the development in identified vulnerabilities coupled with expert judgment | At least semiannually in connection with the publication of FSR by Finansinspektionen |
| Switzerland | For CCyB: to strengthen the resilience of the banking sector against the risks of excessive credit growth and to lean against the build-up of excesses. | The purposes of each macroprudential action are explained when it is implemented. | Not covered | No |
| UK | For CCyB: ensure ability of banking system to withstand stress without restricting essential services, such as the supply of credit, to the real economy. For LTI limit: to limit the risks to economic and financial stability from excessive household indebtedness. | The purposes of each macroprudential action are explained when it is implemented. | For both, set of indicators proposed which would guide adjusting instruments | Process exists③ |
| US | For CCyB: to strengthen banking organisations' resilience and to reduce fluctuations in the supply of credit. For G-SIB surcharge: see Box A. | The purposes of each macroprudential action are explained when it is implemented. | Resulting capital ratios and assessment of financial system vulnerabilities | Process exists④ |

① "When implemented" means the time at which the framework was set up that enables the policymaker to use (deploy) the instrument. ② "Not covered" means that the communication of the intermediate objectives / the purposes of the macroprudential instruments did not include a discussion of the evaluation strategy. ③ For the CCyB, any change to the intermediate objectives for the tool would require reissuance of the FPC's CCyB policy statement. For the LTI limit, the FPC set out the intermediate objectives for this measure in its June 2014 *Financial Stability Report*. It reviews at regular intervals the calibration of the limit, the rationale for applying the limit and the desirability of keeping the limit in place. If changes were made, these would be communicated via the record of the FPC's meetings and the *Financial Stability Report*. ④ For the CCyB, the process would involve a re-proposal of the CCyB policy statement. For the G-SIB surcharge, the process would – if it changed the methodology for calculating the surcharge – require a re-proposal of the G-SIB surcharge rule.

Overview of communication features across selected jurisdictions

Table 4

| | | BE | ECB | ES | FR | IN | IT | JP | LU | NL | SE | CH | UK | US |
|---|---|----------|-----|-----|-----------|-----------------|-----|-----|-----|-----|----------------------|-----|-----|------------|
| Macroprudential policy | Statement following policy meetings | • | | | • | • | | | | | • | | • | • |
| | Meeting minutes/records | • | | | | | | | | | • | | • | |
| | Announcement of measures on website | • | | • | • | • | • | | • | • | • | | • | • |
| | Overview of active instruments | | | | • | • | | | • | • | | | • | • |
| Report (financial stability, including macroprudential) | Main report (financial stability / annual / macroprudential report)① | FSR / AR | FSR | FSR | FSR② / AR | FSR / RTP③ / AR | FSR | FSR | FSR | OFS | FSR (CB) / FSR (FSA) | FSR | FSR | AR / other |
| | Frequency of publication (a = annual; sa = semiannual; ba = biannual) | a | sa | sa | sa / a | sa / a / ba | sa | sa | a | sa | sa | a | sa | a / sa |
| | Risk assessment | • | • | • | •/- | •/-/• | • | • | • | • | • | • | • | • |
| | Discussion of macroprudential instruments | • | | • | •/• | •/-/• | • | | • | • | • | • | • | • |
| | Topical features in main report / separate publication | • | • | • | •/• | •/-/• | • | • | • | • | • | • | • | • |
| | Other reports , eg bulletin, bank structures, research notes | | • | • | • | • | • | • | • | • | • | • | | • |
| Website | Warnings and recommendations | • | | | | • | | | • | • | • (CB) | | • | |
| | Featured financial stability/macroprudential section on website | • | | • | -/• | • | • | • | • | • | • | • | • | • |
| | Publication of financial stability indicators | • | | | • | • | | | • | • | • | | • | |
| | Section/publication on decision process / governance | • | | | •/• | | | | • | • | • | • | • | • |
| | Section on international cooperation | • | | • | | | | • | • | • | • | | | |

① FSR = financial stability review/report; OFS = overview of financial stability; AR = annual report. ② The “Assessment of risks to the French financial system” (ie the French FSR) brings together analyses prepared by Bank of France staff and the Autorité de contrôle prudentiel et de résolution (French supervisory and resolution authority) and provides a basis for macroprudential interventions by the HCSF. The assessment is published twice per year. ③ *Report on trend and progress of banking in India.*

List of key terms used in this report

| Key terms | | Table 5 |
|--|--|---------|
| Term | Characterisation for the purposes of this report | |
| Macroprudential instruments | All policy measures that have been undertaken with a macroprudential purpose in mind. This may include measures such as amortisation limits or reserve requirements. | |
| Overall objective (of the macroprudential authority) | Defines the purpose for which the public authority is to act, for example, to safeguard financial stability. | |
| Intermediate and operational objectives (of the macroprudential authority) | Make the overall objective more concrete and, typically for operational objectives, quantifiable. | |
| Function (of the macroprudential authority) | Defines the scope of the macroprudential authority's activities, for example the formulation and implementation of macroprudential policy. | |
| Power (of the macroprudential authority) | The rights the macroprudential authority has when performing its function, for example to request information from supervised institution, or to enforce regulatory standards. | |
| Mandate (of the macroprudential authority) | An authorisation to carry out policy, collecting objectives, functions and powers for a macroprudential authority. | |

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