

## Macroprudential oversight in Germany: framework, institutions and tools

*The Act on Monitoring Financial Stability (Gesetz zur Überwachung der Finanzstabilität), also referred to as the Financial Stability Act (Finanzstabilitätsgesetz), came into force at the beginning of 2013, establishing a legal framework for macroprudential oversight in Germany. The Financial Stability Committee (Ausschuss für Finanzstabilität) was set up as Germany's national macroprudential institution and convened for the first time in mid-March. This has created a new institutional structure for cooperation between the Federal Government, the Federal Financial Supervisory Authority (BaFin) and the Deutsche Bundesbank in the field of financial stability. The Financial Stability Act bestows important functions on the Bundesbank. The Bank is responsible, in particular, for analysing factors that are key to financial stability, identifying risks, making proposals to the Financial Stability Committee regarding the issuing of warnings and recommendations, and evaluating the implementation of such warnings and recommendations.*

*The need to set up macroprudential institutions with clearly defined mandates and to develop a corresponding toolkit are two key lessons learnt from the financial crisis, as misalignments within the financial system provided the root causes of why the financial crisis was so persistent and severe. This experience has served as a reminder of the importance of systemic risk. The macroprudential dimension of financial supervision and regulation therefore aims to restrict systemic risk and thus to help to maintain financial stability.*

*At present, there are a number of challenges facing macroprudential oversight in Germany. A coherent strategy will need to be developed, including an analytical framework for identifying and evaluating risks as well as a system of intermediate objectives and, where possible, operational targets. New EU legislation is about to be passed on important macroprudential tools. Further economic analyses will be needed to document as fully as possible how these tools would work – and what the side effects would be – should they be deployed. When using macroprudential instruments, it is essential to weigh up the pros and cons of applying a discretionary versus a rules-based approach.*

## ■ Framework

### The macroprudential approach: a lesson learnt from the financial crisis

*Misalignments within the financial system ...*

The financial crisis began in 2007, when numerous financial institutions suffered losses on structured securities, bringing some to the verge of collapse. Prior misalignments then came to light, such as an erosion of credit standards for mortgage loans in the United States or questionable practices in assigning credit ratings. At the same time, weaknesses became apparent in the business models of some banks which were heavily reliant on short-term funding and had accumulated a high level of concentration risk. Following the collapse of US investment bank Lehman Brothers in the autumn of 2008, the turmoil spread, escalating into a systemic crisis. As banks rapidly lost confidence in one another, important bank funding markets dried up. Consequently, central banks felt compelled to substantially increase their provision of liquidity to the banking system. At the same time, failing banks – including some in Germany – had to be bailed out by the state.

*... caused the financial crisis*

Misalignments within the financial system itself evidently provided the root causes of why the financial crisis was so persistent and severe. This experience has served as a reminder of the key influence of systemic risk on the macroeconomic costs of financial instability. The financial system is not only affected passively by external misalignments (“exogenous shocks”) stemming, for example, from the real economy or from fiscal policy; the internal workings and structures of the financial system itself can also actively encourage stability risks to build up and instability to spread and intensify. These endogenous mechanisms which originate in the financial system and can cause or amplify crises are called systemic risks.<sup>1</sup>

The literature on financial stability distinguishes between two features of systemic risk.<sup>2</sup> The

first is the “time dimension” of systemic risk, where procyclical forces in the financial system lead to a gradual build-up of potential vulnerabilities. This procyclicality encourages a sequence of ever greater excesses. In such periods of exuberance, market participants are willing to take high risks, or they systematically underestimate the riskiness of financial investments. This increases market liquidity and improves financing conditions, but also promotes private sector debt. If doubts then emerge about the sustainability of this trend, the tide may turn, triggering a flight to safety. Market participants then largely shy away from risk, which can cause risky assets to fall in value dramatically. At the same time, the liquidity situation and financing conditions worsen, causing an additional drag on macroeconomic activity. Furthermore, risk concentrations mean that once disruptions have occurred, they spread throughout the financial system (the “cross-sectional dimension” of systemic risk). A number of different phenomena play a role in this development, including unidirectional risks at numerous individual financial institutions, interconnectedness via central markets or infrastructures, the existence of systemically important entities and the domino effects that these entities trigger if they experience financial distress.<sup>3</sup>

*Time and cross-sectional dimensions of systemic risk*

Ensuring the solvency of each individual financial institution is key for the stability of the financial system as a whole, yet that alone is not enough to maintain financial stability. Each individual financial institution may well continue to fulfil solvency requirements even as serious systemic risks are building up. If these systemic risks ultimately materialise, substantial solvency problems may arise – often affecting several financial institutions at the same time. As well as

*Adding a macroprudential perspective to regulation and supervision*

<sup>1</sup> See Deutsche Bundesbank, Financial Stability Review 2009, p 70.

<sup>2</sup> See C Borio (2003), Towards a macroprudential framework for financial supervision and regulation?, BIS Working Papers, No 128, p 10 ff.

<sup>3</sup> See Deutsche Bundesbank, Approaches to the measurement and macroprudential treatment of systemic risk, Monthly Report, March 2011, pp 37-51.

ensuring the solvency of individual financial institutions, it is therefore also necessary to detect and effectively limit systemic risk as early as possible in order to safeguard financial stability. Consequently, it is imperative to add a macroprudential perspective and suitable macroprudential tools to regulation and supervision. The need to set up macroprudential institutions with clearly defined mandates is thus one of the key lessons learnt from the financial crisis.

## Aims of macroprudential policy and its links with other policy areas

*Ultimate goal: contributing to financial stability*

The ultimate goal of the macroprudential dimension of supervision and regulation is to contribute to financial stability<sup>4</sup> and thus to promote overall economic growth and employment. To achieve this, macroprudential oversight and policy are tasked with limiting systemic risk. As this risk can take a number of different forms, however, a fully-fledged macroprudential strategy needs to be based on a whole range of intermediate objectives and operational targets. To address the time dimension of systemic risk, operational targets such as avoiding inappropriately high credit growth or excessive debt among economic agents are likely to play a role in such a strategy. For the cross-sectional dimension of systemic risk, preventing a build-up of concentration risk and ensuring stable financial infrastructures<sup>5</sup> are two important intermediate objectives. The debate among academics and practitioners as to what system of objectives would be most suitable is still in full swing.

Like other economic policy objectives, the stability of the financial system can be impacted by other areas and policy spheres; consequently, there are important overlaps between macroprudential oversight and policy and other fields – notably microprudential supervision, monetary policy and fiscal policy.

Given that they both monitor the financial system and financial institutions, there is a close link between macroprudential oversight and microprudential supervision, and it is therefore important to ensure close coordination between the two. Findings on potential macroprudential vulnerabilities help microprudential supervisors to identify and address institution-specific risks at an early stage. By the same token, macroprudential overseers benefit from information provided by microprudential supervisors. For example, certain risks may accumulate at individual financial institutions which would not be noticed in a purely aggregate analysis but become systemically important because these institutions are interconnected with other financial intermediaries. Part of this coordination between macroprudential oversight and microprudential supervision occurs within the Bundesbank as, pursuant to section 7 of the German Banking Act (*Gesetz über das Kreditwesen*), the Bundesbank is responsible for the ongoing monitoring of institutions. In addition, the Bundesbank has numerous ties with BaFin, including through BaFin's Risk Committee, whose meetings Bundesbank representatives are regularly invited to attend.

There are also reciprocal effects between macroprudential oversight and other policy areas. For instance, monetary policy decisions also have an impact on financial stability, eg through their effect on asset prices. Furthermore, through its credible commitment to safe-

*Coordination between macroprudential oversight and microprudential supervision*

*Monetary and financial stability: complementary objectives in the long term*

---

<sup>4</sup> The Bundesbank defines financial stability as the ability of the financial system to smoothly fulfil its key economic functions – in particular, the efficient allocation of financial resources and risks along with the provision of a well-functioning financial infrastructure – at all times, including in stress situations and periods of structural upheaval. See Deutsche Bundesbank, *Financial Stability Review 2010*, p 7.

<sup>5</sup> The Bundesbank makes its own independent contribution to financial stability through its oversight of financial market infrastructures (payment settlement and securities settlement systems, central counterparties etc). The macroprudential policy authority works in close cooperation with the parties responsible for overseeing financial market infrastructures in order to identify and, where necessary, address systemic risk originating in this area. See Deutsche Bundesbank, *The new CPSS-IOSCO Principles for financial market infrastructures*, Monthly Report, July 2012, pp 33-43.

guarding monetary stability, a central bank helps to ensure a stable financial system, as investment decisions are not distorted by uncertainty regarding future monetary value. Conversely, a stable financial system ensures that the channels of monetary policy transmission function smoothly, thus enabling the primary task of monetary policy – safeguarding monetary stability – to be fulfilled in a more targeted manner. Monetary and financial stability are therefore complementary objectives over the longer term.

*Macroprudential measures can ease the burden on monetary policy*

Given the complementary nature of monetary and financial stability, macroprudential measures can ease the burden on monetary policy. In the absence of a macroprudential policy, monetary policymakers can easily come under pressure to use their toolkit to safeguard financial stability even though it is ill-suited to the task. Furthermore, despite being complementary in the long term, the two objectives may clash in the short term: a measure that is advisable from a monetary policy perspective may not necessarily also be suitable for combating risks to financial stability. By contrast, macroprudential policy generally encompasses a broad set of instruments for achieving its aim of financial stability and should, therefore, be able to counteract specific misalignments in the financial system in a more targeted manner than through interest rate policy, for example. This is especially true of the euro area, where the single monetary policy has to be geared to conditions in the monetary union as a whole and can respond to developments in individual sectors or member states only where these affect aggregate euro-area inflation.

*Interaction with fiscal policy*

Macroprudential policy interacts with fiscal policy, too. A successful macroprudential policy makes financial crises less frequent and less intense, thus lowering the costs of fiscal policy crisis measures. Conversely, fiscal policy measures can have an impact on financial stability. In particular, tax policy decisions may lead to shifts in financial resources between different types of investment: the tax treatment of mort-

gage rates, for example, may incentivise investments in real estate which, in turn, may encourage excesses on the real estate markets.

Furthermore, as the sovereign debt crisis has shown, there is often a close negative feedback loop between a government and its domestic banking sector. This is because banks are key government creditors, holding large amounts of government debt in the form of securities and loans. Moreover, in the euro area, the banking sector accounts for the lion's share of lending to the non-financial private sector. If credit institutions' lending to the real economy were restricted unduly because of a financial crisis, this could consequently have a considerable negative impact on growth and employment, and thus ultimately on a country's fiscal position.

*Close negative feedback loop often exists between government and banking sector*

## ■ Macroprudential institutions

### International level

Much progress has already been made in conferring macroprudential mandates on institutions. At a global level, the responsibilities of the Financial Stability Board (FSB) and the International Monetary Fund (IMF) include monitoring the risk situation and risk trends within the international financial system. The FSB and the IMF have intensified their collaboration in this area at the behest of the G20: the IMF is primarily responsible for identifying macrofinancial vulnerabilities, ie risks stemming from the interaction between the real economy and the financial sector, while the FSB – in collaboration with national authorities – focuses on detecting vulnerabilities within the financial system itself. The aim is to identify shortcomings in the international financial system, to develop proposals to rectify them and to oversee any action to implement these proposals. The FSB is responsible for coordinating regulatory and supervisory policy at the international level and for heightening cooperation and the exchange

*Institutions with macroprudential tasks at a global level: FSB and IMF*

of information between the institutions involved.

The FSB has drawn up a Compendium of Standards for sound financial systems,<sup>6</sup> which contains “key standards” considered to be deserving of priority implementation. The FSB’s member countries are obliged to meet these standards and to maintain stable, transparent and open financial systems. Furthermore, they undergo regular international peer reviews of their national financial sectors and participate in the Financial Sector Assessment Program (FSAP) run by the IMF and the World Bank.<sup>7</sup>

smoothly and efficiently, but will also prevent national protectionism. The use of macroprudential tools in the EU will, therefore, be governed by the Capital Requirements Directive IV (CRD IV) and the Capital Requirements Regulation (CRR). The EU’s legislative procedure is about to be completed for both of these legal instruments.

The CRD IV and CRR define a single set of harmonised prudential rules for the EU based on the Basel III Framework set out by the Basel Committee on Banking Supervision (BCBS). At the same time, they allow the EU’s national macroprudential authorities scope for policy-making at their own discretion, eg in relation to the countercyclical capital buffer and sectoral risk weights. It is essential to allow national macroprudential authorities such leeway to stave off threats to the financial system – especially in a monetary union. National authorities have considerable expertise in analysing the national stability situation. In addition, measures may need to be tailored regionally to the varying legal and economic circumstances in the individual member states. By fine-tuning measures passed at an EU level, therefore, national authorities can take targeted and “customised” action to address systemic risk. This helps to avert financial crises and the associated economic costs to individual states, benefiting both the country applying the macroprudential measures and the countries with which it shares trade and financial links.

*Scope for national macroprudential policy ...*

*At an EU level:  
ESRB*

At the EU level, the European Systemic Risk Board (ESRB)<sup>8</sup> took up its duties at the beginning of 2011. It forms the macroprudential pillar of the new European System of Financial Supervision (ESFS), with the three European Supervisory Authorities (ESAs) making up the microprudential part.<sup>9</sup> The ESRB draws on the combined expertise of the EU’s national central banks and supervisory authorities to identify and evaluate systemic risk. Where necessary, it issues warnings and recommendations – to EU institutions, national governments and supervisory authorities<sup>10</sup> – regarding remedial action in response to identified risks to financial stability. The addressees of recommendations are obliged to inform the ESRB and the European Council of the action taken to implement them or to provide detailed justification for their inaction (“act or explain” mechanism), thus making them accountable to the EU institutions and the public at large.

## Cooperation between the national and the EU level

*Coordination between national and EU level desirable*

In view of the EU’s single market and the fact that macroprudential measures often have cross-border effects, it makes sense to harmonise the terms and criteria for deploying macroprudential instruments and to coordinate their use at an EU level. This will not only ensure that the single EU financial market functions

<sup>6</sup> See [www.financialstabilityboard.org/cos/index.htm](http://www.financialstabilityboard.org/cos/index.htm).

<sup>7</sup> The most recent FSAP assessment for Germany was completed in the summer of 2011. The first FSB peer review for Germany will be carried out in the second half of 2013.

<sup>8</sup> See Deutsche Bundesbank, The European Systemic Risk Board: from institutional foundation to credible macroprudential oversight, Monthly Report, April 2012, pp 29-39.

<sup>9</sup> The three ESAs are the European Banking Authority (EBA), the European Insurance and Occupational Pensions Authority (EIOPA) and the European Securities and Markets Authority (ESMA).

<sup>10</sup> For more information on the formal procedure, see Regulation (EU) No 1092/2010 of the European Parliament and of the Council of 24 November 2010 on European Union macro-prudential oversight of the financial system and establishing a European Systemic Risk Board.

... will be maintained within the SSM

When the Single Supervisory Mechanism (SSM) is set up – from mid-2014 onwards based on the current stage of negotiations – national authorities will retain their responsibilities and their ability to take action with their own national macroprudential policies. The SSM will confer asymmetric powers of intervention on the European Central Bank (ECB), enabling it to tighten the macroprudential measures imposed by an SSM member country but not to water down the macroprudential requirements below the level set by the national macroprudential authority. This will allow national supervisors to take action to protect their financial system but will also ensure that they cannot shield domestic banks inappropriately (“inaction bias”). The original measures taken by national macroprudential authorities and any stricter measures imposed by the ECB will both trigger a formal information and consultation mechanism.<sup>11</sup>

## Design of Germany’s institutional framework

Germany began to apply the lessons learnt from the financial crisis to its financial regulation soon after the crisis broke out, setting up individual resolution agencies for credit institutions’ non-performing assets,<sup>12</sup> creating a fund for recapitalising and restructuring financial institutions and imposing a temporary ban on naked short selling for certain types of securities. In addition, the adoption of the Financial Stability Act,<sup>13</sup> which entered into force at the beginning of 2013, was another step promoting lasting stability in Germany’s financial system.

National level: Financial Stability Committee ...

The Financial Stability Act provides the legal framework for the Financial Stability Committee, Germany’s newly established national macroprudential institution. The Federal Ministry of Finance, BaFin and the Bundesbank each have three voting representatives on the Financial Stability Committee, while the Federal Agency for Financial Market Stabilisation (*Bun-*

*desanstalt für Finanzmarktstabilisierung*) has one non-voting advisory member.

The Financial Stability Committee discusses the factors that are key to financial stability, strengthens cooperation between the institutions represented on it, advises on the handling of warnings and recommendations issued by the ESRB and reports annually to the lower house of Parliament (the Bundestag) on the situation regarding and developments in financial stability as well as on its own activities. In particular, the Financial Stability Committee is able to issue warnings and recommendations to all public bodies in Germany in order to promptly combat any adverse developments which may cause risks to financial stability. As with the ESRB’s recommendations, the addressees of these recommendations must adhere to the “act or explain” mechanism.

... assumes responsibility for macroprudential oversight in Germany

The Bundesbank performs important functions within the Financial Stability Committee and brings its expertise in macroprudential and macroeconomic analysis as well as in the microprudential supervision of financial institutions and infrastructures to bear. The Bank analyses factors that are key to financial stability and identifies risks which may impair financial stability. In addition, it prepares the Financial Stability Committee’s annual report to the Bundestag on the situation regarding and developments in financial stability in Germany. Lastly, it makes proposals to the Committee regarding the issuing of warnings and recommendations and evaluates their implementation by the addressees. The Bundesbank maintains its independence in all of the tasks designated to it as a member of the Financial Stability Committee.

Bundesbank brings its expertise to bear

<sup>11</sup> If, for example, the ECB intends to tighten national requirements, it must notify the member state in question ten working days prior to the formal decision. The member state then has five working days to set out its position on the matter to the ECB.

<sup>12</sup> See Deutsche Bundesbank, The German government’s “bad bank” model, Monthly Report, May 2009, pp 54-57.

<sup>13</sup> See Federal Law Gazette I (Bundesgesetzblatt I) of 28 November 2012, No 56, issued in Bonn on 3 December 2012. See also Federal Ministry of Finance, Monthly Report, January 2013, pp 25-28 (in German only).

## Extracts from the Act on Monitoring Financial Stability (Financial Stability Act)\*

### Section 1

#### Safeguarding financial stability

(1) The Deutsche Bundesbank shall contribute to safeguarding the stability of the financial system (financial stability) in Germany, in particular by

- 1 analysing factors that are key to financial stability and identifying risks which may impair financial stability,
- 2 preparing a report once a year on the situation regarding and developments in financial stability, and making this report available to the Financial Stability Committee (*Ausschuss für Finanzstabilität*) for the purposes of fulfilling its reporting obligation pursuant to section 2 (9),
- 3 making proposals to the Financial Stability Committee regarding the issuing of warnings pursuant to section 3 (1) and recommendations pursuant to section 3 (2), and
- 4 evaluating the implementation measures pursuant to section 3 (4) sentence 2 and informing the Financial Stability Committee of its assessment.

(2) This is without prejudice to the Deutsche Bundesbank's powers pursuant to other provisions. Section 12 of the Bundesbank Act (*Gesetz über die Deutsche Bundesbank*) shall apply *mutatis mutandis*.

### Section 2

#### Financial Stability Committee

(1) The Financial Stability Committee shall be set up at the Federal Ministry of Finance (*Bundesministerium der Finanzen*) in order to strengthen cooperation in the area of financial stability.

(2) The Financial Stability Committee's tasks shall include, in particular,

- 1 discussing the factors that are key to financial stability,
- 2 strengthening cooperation between the institutions represented on the Financial Stability Committee in the event of a financial crisis,
- 3 advising on the handling of warnings and recommendations issued by the European Systemic Risk Board,
- 4 reporting annually to the lower house of Parliament, the Bundestag, in accordance with subsection (9), and
- 5 issuing warnings and recommendations pursuant to section 3 (1) and (2), and publishing the same pursuant to section 3 (6).

(3) The Financial Stability Committee shall consist of

- 1 three representatives of the Federal Ministry of Finance, one of whom shall be delegated as the chair and one as the deputy chair of the Committee,
- 2 three representatives of the Deutsche Bundesbank, and
- 3 three representatives of the Federal Financial Supervisory Authority (*Bundesanstalt für Finanzdienstleistungsaufsicht*, hereinafter referred to as BaFin).

---

\* *Gesetz zur Überwachung der Finanzstabilität (Finanzstabilitätsgesetz)*. This translation is provided by the Deutsche Bundesbank and is for information purposes only. This translation is not official; the only authentic text is the German one as published in the Federal Law Gazette I (*Bundesgesetzblatt I*), page 2369.

The chair of the Management Committee (*Leitungsausschuss*) of the Federal Agency for Financial Market Stabilisation (*Bundesanstalt für Finanzmarktstabilisierung*, hereinafter referred to as the FMSA) shall be a non-voting advisory member of the Committee. The aforementioned institutions shall also nominate an alternate for each representative.

(4) The Financial Stability Committee shall be convened by the chair once every quarter. Every member may, for good cause, request that the Committee be convened at short notice. Third parties may be called to attend meetings by the chair. The Committee shall adopt its rules of procedure by mutual consent.

(5) Unless otherwise stipulated, the Financial Stability Committee's decisions shall require a simple majority. Decisions regarding warnings and recommendations and the publication thereof pursuant to section 3 (6) should be taken unanimously; decisions regarding the submission of the report pursuant to subsection (9) should be taken unanimously. Decisions pursuant to sentence 2 may not be taken contrary to the votes of the Deutsche Bundesbank representatives in attendance.

(6) The deliberations of the Financial Stability Committee shall be confidential. This shall not entail a restriction on the general reporting activities of the Committee and its members concerning the meetings and the work of the Committee.

(...)

(9) The Financial Stability Committee shall report annually to the Bundestag on the situation regarding and developments in financial stability as well as on its activities pursuant to this Act.

(...)

### Section 3 Warnings and recommendations

(1) In warnings to a specific addressee, the Financial Stability Committee may draw attention to risks which might impair financial stability. Detailed reasons shall be given for the warnings.

(2) In recommendations to a specific addressee, the Financial Stability Committee may identify the measures that it considers to be suitable and necessary for the addressee to implement in order to avert risks to financial stability.

(3) The addressee of a warning or recommendation may be the Federal Government, BaFin or another public body in Germany.

(4) The addressee of a recommendation shall notify the Financial Stability Committee within a reasonable period of time of how it intends to implement the recommendation. It shall regularly inform the Committee of its implementation progress. If the addressee does not intend to implement a recommendation, it shall give detailed reasons therefor.

(5) If the Financial Stability Committee establishes that its recommendation addressed to a federal state (*Land*) public body has not been followed or that the addressee has failed to provide adequate reasons for its inaction, it may, in keeping with strict confidentiality provisions, inform all of the federal state governments.

(6) The Financial Stability Committee may publish the warnings and recommendations. It shall provide the respective addressee with advance notification of its intention to publish a recommendation and shall give the addressee the opportunity to comment.

(...)



It cannot be made to participate unwillingly in the adoption of opinions or measures that it does not advocate, as the Financial Stability Committee cannot take key decisions contrary to the votes of the Bundesbank representatives in attendance.<sup>14</sup>

*Germany has implemented ESRB Recommendation*

Germany's Financial Stability Act has implemented the ESRB Recommendation on the macroprudential mandate of national authorities,<sup>15</sup> which calls on EU member states to designate an authority entrusted with the conduct of macroprudential policy and to mandate it with the corresponding tasks. The Recommendation gives member states two options for their institutional arrangements: the macroprudential authority can either be a single institution or a board composed of several institutions. Whichever option a member state chooses, it must establish mechanisms for cooperation among all authorities whose actions have a material impact on financial stability and ensure that the central bank plays a leading role in macroprudential policy.<sup>16</sup>

*Financial Stability Committee ensures cooperation among its member institutions*

By conferring the national macroprudential mandate on the Financial Stability Committee, Germany has opted for a board composed of several institutions. This structure – as required by the Recommendation – ensures cooperation among the different institutions whose actions have a material impact on financial stability. At the same time, it takes account of the complex nature of financial stability. The ultimate goal of safeguarding financial stability involves a whole range of intermediate objectives which may relate to markets, intermediaries or financial infrastructures. Moreover, measures in a number of different policy areas have an impact on financial stability. This complexity is the reason why the macroprudential authority has been given the power to issue warnings and recommendations, while the entities entrusted with primary tasks have retained their competencies. Ultimate responsibility for safeguarding financial stability lies with political bodies.

## ■ Macroprudential tools

Alongside a clear regulatory and institutional framework, an efficient macroprudential policy also requires effective and efficient tools. To prevent evasive reactions and regulatory arbitrage, this macroprudential toolkit must generally be applicable to all financial market participants – not only the banking sector but also insurance companies and areas of the financial market which have been less regulated up to now.

*Toolkit must be applicable to all financial market participants*

Macroprudential instruments can generally be categorised according to the legal strength of the intervention that they entail, ranging from “soft” (communication) to “intermediate” (warnings and recommendations) and “hard” (intervention).

## Communication

As in other policy areas, public communication is an important tool with regard to macroprudential policy. As a “soft” instrument, however, it does not involve direct intervention in the business activities of market participants but influences, in particular, how they form their expectations. This tool should, therefore, be used at an early stage of risk formation, although its success depends largely on the reputation of the macroprudential institution in question. The formal obstacles for its use are low, its legal implications are minor – especially in comparison with other types of instrument – and the danger of unwanted side effects is usually small. The Bundesbank publishes its own analyses and assessments of financial stability, pri-

*“Soft” tool of communication ...*

<sup>14</sup> See section 2 (5) of the Financial Stability Act.

<sup>15</sup> See ESRB, Recommendation on the macroprudential mandate of national authorities (ESRB/2011/3), 22 December 2011

<sup>16</sup> The Recommendation states explicitly that macroprudential policy must not be allowed to undermine the central bank's independence in accordance with Article 130 of the Treaty on the Functioning of the European Union (recommendation B, subsection 3).

marily in its *Financial Stability Review* but also in research papers, press releases and speeches.

*... ensures transparency*

Public communication also ensures that macroprudential policy is transparent. In terms of macroprudential oversight, this means that strategies and decision-making structures must be disclosed and macroprudential authorities held publicly accountable for their actions. Consequently, in its recommendation on the macroprudential mandate of national authorities, the ESRB explicitly calls on member states to ensure “that the macroprudential policy strategies are set out and published by the macro-prudential authority”.<sup>17</sup> It is essential for macroprudential policymakers to be transparent vis-à-vis the general public and market participants. The Financial Stability Committee meets this obligation, in particular, by submitting an annual report to the Bundestag on its activities and on the situation regarding and developments in financial stability.

## Warnings and recommendations

*Warnings and recommendations, as a second step, ...*

If a threat to financial stability becomes more concrete, however, public communication is generally unlikely to suffice. Macroprudential policymakers can then make use of formal communication tools, namely warnings and recommendations. These “intermediate” instruments are the key policy tools for both Germany’s Financial Stability Committee and the EU’s ESRB. Warnings flag existing risks to financial stability without yet giving any instructions on how to address them. Recommendations, by contrast, offer specific guidance on what measures to take. This action may involve making full use of existing possibilities (eg activation of a countercyclical capital buffer) or may be aimed at eliminating deficiencies in the regulatory and institutional framework.

*... may be public or confidential*

The Financial Stability Committee can issue warnings and recommendations either publicly or directly to addressees. As macroprudential

policy is required to be transparent and predictable, it can be assumed that warnings and recommendations will generally be made public. In isolated cases, however, it would also be conceivable to keep warnings or recommendations confidential, particularly if there is a danger of their publication triggering reactions which could initially have a marked destabilising effect.

## Intervention tools

Tools of intervention, such as additional capital buffers or greater risk weights for certain credit claims, are classified as “hard” instruments (see the box on pages 50 to 53). These instruments must be enshrined in law and their use made subject to democratic supervision. The toolkit should, in principle, be as simple as possible but as broad as necessary to adequately address the various threats to financial stability while keeping unwanted side effects to a minimum.

*Broad range of tools for influencing business activity directly ...*

As an alternative to categorising macroprudential instruments as “soft”, “intermediate” and “hard”, they can also be classified according to the dimension of systemic risk that they seek to address: time or cross-sectional.

Numerous instruments aimed at reducing the cyclical components of systemic risk are currently under discussion at an international level. In addition to time-varying capital and liquidity requirements, these tools include the introduction of a leverage ratio, options for increasing the risk weights for certain asset classes, the adjustment of loan collateral standards and dynamic credit risk provisioning. Discussions regarding possible tools for combating the cross-sectional dimension of systemic risk centre, in particular, on additional capital add-ons for systemically important financial institutions (SIFIs),

*... under discussion at an international level*

<sup>17</sup> See ESRB, Recommendation on the macro-prudential mandate of national authorities (ESRB/2011/3), 22 December 2011.

liquidity ratios aimed at encouraging stable sources of funding, and market infrastructure measures (see the box on pages 50 to 53). The list above provides an initial selection of possible macroprudential tools for containing systemic risk. It is based on the lessons learnt from the financial crisis and the international debate on the design and structure of macroprudential regulation, but it is by no means exhaustive.

## ■ Outlook and challenges

The ultimate goal of macroprudential policy is to contribute to financial stability. This defined objective throws up a number of challenges. First, a system of intermediate objectives is required to define macroprudential policy's contribution to financial stability in more detail. Second, it must be established whether there are any deviations from the intermediate objectives which require action to be taken. To achieve this, an analytical framework is needed, possibly containing operational targets. Finally, suitable tools must be available to correct any deviations from the objectives, as well as sound analyses of how these tools work.

## Analysis of tools

To be able to select suitable intervention tools, policymakers must analyse the potential threat posed by a specific stability risk, the impact chain (or "transmission process") via which an instrument helps to achieve the operational target or intermediate objective in question, and the legal framework for the instrument's use. To ensure that instruments are employed efficiently, this analysis of the transmission process ("transmission map")<sup>18</sup> must cover, in particular, the possible side effects of their use and any interaction between tools that are deployed in parallel.

A number of factors must be borne in mind when deciding whether the use of an instrument is efficient. In addition to macropruden-

tial tools, the list of conceivable measures could well encompass other forms of intervention outside of the macroprudential policy remit. For instance, tax regulations can play a key role in respect of excesses on the real estate markets and adjusting them would have relatively few side effects. Within the realm of macroprudential policy, it would be conceivable over the longer term to use several macroprudential tools at once to avoid expected but undesirable side effects caused by using certain instruments in isolation. However, an approach of this kind makes the measure more complex, as both the effects of the individual tools and their interaction with each other would have to be taken into account. Finally, ongoing reviews are needed to monitor whether the available toolkit itself is adequate: it should be enhanced in line with any advances in measuring and analysing the *modus operandi* of macroprudential instruments.

## Binding rules versus discretionary scope

Decisions on when to activate or deactivate tools or sets of tools which have been deemed adequate can be taken following a rules-based or a discretionary approach. Under a rules-based regime, the first step is to establish suitable indicators. They must provide, where possible, forward-looking information on the actual risk situation and be influenced in their development by the macroprudential tool in question. The next step is to set appropriate thresholds for these indicators which, if breached, activate the predefined tool or set of tools. If this successfully brings the indicators back below the thresholds, the tool or set of tools is deactivated. Alternatively, decisions on whether to activate or deactivate intervention tools can be taken entirely at the discretion of

---

<sup>18</sup> For a detailed description of possible transmission processes for different macroprudential instruments, see also Committee on the Global Financial System, Operationalising the selection and application of macroprudential instruments, CGFS Papers, No 48, December 2012.

*Impact analysis  
as a basis ...*

*... for ensuring  
efficient use of  
tools*

## Macroprudential instruments

The following is a list of some of the macroprudential tools that can (potentially) be put to use by authorities. Generally speaking, macroprudential instruments can influence balance sheet totals, the balance sheet structures of financial institutions, or market structures as a whole.

### Capital-related instruments

- countercyclical capital buffer (CCB)
- leverage ratio (LR)

**Definition:** CCB: an additional capital addition applied contingent on the economic cycle; defined as a ratio of common equity tier 1 (CET 1) capital to risk-weighted assets. LR: ratio of tier 1 capital to the sum of all on-balance sheet and off-balance sheet items.<sup>1</sup>

**Transmission:** Capital-related instruments chiefly influence the financial system via three transmission channels. (i) Given an adequate level of capital, accumulating a risk buffer during an upswing in the risk cycle dampens growth in financial institutions' total assets. (ii) Tighter capital requirements increase financial intermediaries' marginal funding costs, provided that the cost of raising equity is higher than the cost of debt financing. This typically boosts institutions' expected return on assets, thereby slowing the pace of balance sheet growth. (iii) Risk buffers raise financial institutions' potential for absorbing losses.

**Benefits:** Research suggests that capital buffers enhance the resilience of financial institutions.<sup>2</sup> Moreover, the Basel III Framework prescribes the principle of reciprocity<sup>3</sup> for the CCB, thereby limiting the scope for regulatory arbitrage. Non-risk-weighted measures are not something that banks can

influence by varying the calculation methods used, making them a meaningful general threshold for balance sheet growth.

**Drawbacks:** Capital-related instruments that do not weigh the risk of assets, or do so inadequately, may prompt financial institutions to shed low-risk assets so as to free up equity for risky and higher-yielding exposures.

**Historical experience:** Credit institutions that came close to collapsing during the financial crisis tended to be more highly leveraged before the outbreak of the crisis than those which, in retrospect, turned out to be stable. The results produced by risk-based capital ratios, by contrast, are not quite as conclusive.<sup>4</sup> In Canada, the LR moderated balance sheet growth at domestic banks.<sup>5</sup> Empirical estimates of the CCB's impact on lending conditions are not totally

<sup>1</sup> Capital-related instruments can be adapted to the demands of financial stability policy by varying the definition of capital.

<sup>2</sup> See Committee on the Global Financial System, Operationalising the selection and application of macroprudential instruments, CGFS Papers, No 48, December 2012, and Basel Committee on Banking Supervision, An assessment of the long-term economic impact of stronger capital and liquidity requirements, August 2010.

<sup>3</sup> If, for example, Germany were to impose a certain buffer for claims on domestic borrowers, other countries would have to impose the same buffer on their banks for cross-border claims on German borrowers. Jurisdictional reciprocity is obligatory up to a buffer of 2.5%.

<sup>4</sup> See Basel Committee on Banking Supervision, Calibrating regulatory minimum capital requirements and capital buffers: a top-down approach, October 2010.

<sup>5</sup> See A Crawford, C Graham and É Bordeleau, Regulatory Constraints on Leverage: The Canadian Experience, Financial System Review, Bank of Canada, June 2009, pp 45-50.

clear, although they tend to indicate that the effects are only minimal.<sup>6</sup>

#### Sustainability-related instruments

- loan-to-value (LTV) cap
- loan-to-income (LTI) cap;
- debt-to-income (DTI) cap

**Definition:** LTV: ratio of the loan principal to the loan value of an asset serving as collateral; LTI: ratio of the loan principal to a borrower's disposable income; DTI: ratio of a borrower's total debt to his/her disposable income.

**Transmission:** Over and above the option of realising the collateral provided by a borrower in default, loan-to-value caps help to limit creditor institutions' exposure to loss. Caps on the LTI and DTI ratios reduce the risk of borrower default by enhancing the sustainability of debt servicing.

**Benefits:** In practice, LTV, LTI and DTI caps can be clearly defined for different sectors. They can be set regardless of the creditor's funding strategy and require little coordination at the international level.

**Drawbacks:** Realising loan collateral can sometimes be time-consuming and costly, and exposes creditors to price risk. There is also the danger of creditors taking evasive action by shifting their focus towards unsecured loans.

**Historical experience:** Empirical evidence tends to suggest that caps on LTV, LTI and DTI ratios reduce credit default rates and curb price exaggerations in certain asset markets.<sup>7</sup>

#### Liquidity and funding ratios

- liquidity coverage ratio (LCR)
- liquid assets ratio (LAR)
- net stable funding ratio (NSFR)

**Definition:** LCR: ratio of the stock of high quality liquid assets (HQLA) to net cash outflows under stress; LAR: ratio of the stock of HQLA to total assets; NSFR: ratio of the available amount of stable funding to the required amount of funding.

**Transmission:** The idea behind laying down specifications for the liquidity of financial institutions is to ensure that, if necessary, liquid assets can be converted into cash to cover short-term outflows of funds. Obliging financial institutions to use stable funding sources, meanwhile, aims to cap the amount of funding that can potentially be withdrawn at short notice. Since stable funding sources tend to be available to financial institutions over the long term, these measures also limit financial institutions' scope for transforming maturities.

**Benefits:** Defining the degree of liquidity of assets held reduces the likelihood of liquidity crises occurring, thus counteracting short-term contagion risks within the financial system. Having criteria for the reliability of the funding sources used is a means of

---

<sup>6</sup> See Macroeconomic Assessment Group, *Assessing the macroeconomic impact of the transition to stronger capital and liquidity requirements*, Interim Report, August 2010. For an overview of the literature on the empirical research into the CCB, see Committee on the Global Financial System, *Operationalising the selection and application of macroprudential instruments*, CGFS Papers, No 48, December 2012, pp 51-57.

<sup>7</sup> See C Crowe, G Dell'Ariccia, D Igan and P Rabanal, *How to Deal with Real Estate Booms: Lessons from Country Experiences*, IMF Working Paper, 11, 91, April 2011, and Hong Kong Monetary Authority, *Loan-to-value ratio as a macroprudential tool – Hong Kong SAR's experience and cross-country evidence*, in *The influence of external factors on monetary policy frameworks and operations*, BIS Papers, No 57, September 2011.

influencing the extent to which financial institutions transform maturities as well as the associated risks.

**Drawbacks:** Liquidity ratios necessitate an appropriate definition of liquidity weights. Without such a definition, a financial institution's solvency may not be ensured if and when required. Added to this, creditors might shift their focus away from loans to households and towards the purchase of liquid securities, thereby curtailing the supply of credit to the real economy. Introducing requirements for financial institutions' funding sources may also restrict the availability of certain short-term deposit vehicles.

**Historical experience:** Research indicates that obliging credit institutions to hold higher levels of liquidity during an economic upturn can help to lean against liquidity-driven credit growth.<sup>8</sup> There is also evidence that increasing the LAR exerts a contractionary effect on financial institutions' lending conditions.<sup>9</sup>

### Sectoral risk weights

**Definition:** The risk weights assigned to individual asset classes can be adapted as part of the calculation of risk-weighted assets, thereby varying the capital buffer required for these assets.

**Transmission:** Tighter capital requirements for sector-specific assets increase financial institutions' potential for absorbing losses. Where the additional capital requirements raise the creditor institution's marginal funding costs, an incentive is also created to limit exposure to these asset classes.

**Benefits:** Sectoral risk weights are a means of directly curbing the emergence of risks to financial stability in individual asset classes.

**Drawbacks:** The use of sectoral risk weights is predicated on being able to clearly attribute the risks to financial stability to specific sectors. The data requirements are thus correspondingly high. It can also not be ruled out that risks will be displaced to other sectors once regulatory action has been taken (the "water bed effect").

**Historical experience:** Research suggests that sector-specific credit growth is restrained.<sup>10</sup> However, it is impossible to attribute the effects exclusively to the sectoral risk weights as these are normally implemented in tandem with other measures.

### Capital add-ons for systemically important banks (SIBs)

**Definition:** SIBs are required to maintain a larger capital buffer.

**Transmission:** Tighter capital requirements increase SIBs' potential for absorbing losses should credit default rates rise. At the same time, institutions might see their marginal funding costs increase, thereby reducing or even eliminating any competitive edge they may have on account of an implicit bail-out guarantee.

**Benefits:** Contagion risks potentially emanating from SIBs are curbed. Competitive distortions might also be eliminated. An incentive for credit institutions to reduce their systemic importance may be created, notably on account of the graded nature of the add-ons.

---

<sup>8</sup> T Galac and E Kraft consider the situation in Croatia in *Macroprudential Regulation of Credit Booms and Busts: The Case of Croatia*, Policy Research Working Paper 5772, World Bank, August 2011.

<sup>9</sup> See Macroeconomic Assessment Group, *Assessing the macroeconomic impact of the transition to stronger capital and liquidity requirements*, Interim Report, August 2010.

<sup>10</sup> See Bank of England, *Instruments of macroprudential policy*, Discussion Paper, December 2011.

**Drawbacks:** Measuring individual banks' systemic importance is subject to uncertainty; this status also varies over time. Additionally, banks' owners and management face incentive problems, particularly in the areas surrounding the threshold values.

**Historical experience:** Research findings confirm that specific capital buffers raise marginal funding costs and point to tighter lending conditions as well as a minimal negative impact on economic growth during phasing-in. The probability of systemic crises occurring falls.<sup>11</sup>

Historical experience regarding the use of macroprudential instruments is still rather scarce compared with other policy areas. Additionally, instruments are often deployed in tandem with other measures so as to tackle any evasive reactions.<sup>12</sup> This normally complicates efforts to identify the marginal

stability impact of each measure in isolation. The results available to date also indicate that the success and effectiveness of macroprudential instruments hinge on country-specific factors.<sup>13</sup> However, the heterogeneity of the economic framework conditions not only means that individual instruments must always be judged in a national context, but also underscores the need for national flexibility in macroprudential policy.

<sup>11</sup> See Macroeconomic Assessment Group, Assessment of the macroeconomic impact of higher loss absorbency for global systemically important banks, Report, October 2011. The results of the simulations are highly dependent on the assumptions made (eg regarding the extent to which SIBs' business activities can be substituted by other financial institutions).

<sup>12</sup> For example, the LR might be deployed as a hedge alongside the CCB to offset any calibration errors in the risk weights when calculating risk-weighted assets for the purposes of the CCB.

<sup>13</sup> See C Lim, F Columba, A Costa, P Kongsamut, A Otani, M Saiyid, T Wezel and X Wu, Macroprudential Policy: What Instruments and How to Use Them? Lessons from Country Experiences, IMF Working Paper, October 2011.

macroprudential decision-makers, eg by raising or lowering thresholds on a discretionary basis depending on the situation in hand instead of applying fixed thresholds. Various combinations of these two juxtaposed approaches would also be conceivable.

An entirely rules-based regime improves transparency, increases the influence of policymakers on market participants' expectations and makes macroprudential decisions more predictable, as all market players are familiar with the indicators and thresholds implicated in the use of the tools. It ensures that all market participants are treated equally and that the use of instruments is consistent over time. However, the high degree of uncertainty involved in identifying suitable indicators makes it difficult to apply rules-based approaches systematically. This uncertainty is caused by factors which affect other policy spheres too, including time lags between the collection and publication of relevant data, contradictory information pro-

vided by different indicators and the infrequency of comparable situations.

Under a discretionary regime, the criteria applied by macroprudential decision-makers to interpret the available information on the current risk situation vary over time. Like in rules-based regimes, discretionary approaches may also include thresholds for the indicators under observation, but these do not automatically trigger deployment of an instrument; instead, they may be considered cause for more in-depth analyses, such as stress tests or simulations of financial institutions' recapitalisation needs. Discretionary approaches are highly flexible and allow a prompt regulatory response to sudden changes in the situation regarding risks to financial stability. However, they are less transparent than rules-based regimes, may not have the desired effect on market participants' expectations and are more prone to criticism and accusations of unequal treatment.

*... or discretionary regime?*

*Rules-based decisions ...*

When using macroprudential instruments, it is essential to weigh up the pros and cons of applying a discretionary versus a rules-based approach. Each financial cycle exhibits both generic and unique characteristics, which must always be evaluated using qualitative information as well as empirical indicators. Some scope for discretion is therefore needed when deciding the timing and intensity of macroprudential

measures. At the same time, it must be ensured that macroprudential policy is predictable for market participants and that instruments are deployed in an appropriate and transparent fashion. Monetary policy theory and practice suggest that policymaking is most effective when it is predictable, transparent and consistent.