

# Macroprudential Regulation and Supervision: From the Identification of Systemic Risks to Policy Measures

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*Macroprudential regulation and supervision of systemic risks is one of the most discussed issues on both the national and international regulatory agenda. This rather new concept presents regulators and supervisors with a number of major challenges.*

*First, in the sphere of risk identification and assessment, the main tasks will be assessing network effects, enhancing stress tests, expanding the supervisory scope to include nonbank financial intermediaries and distilling the findings from various analytical strands into an overall perspective on systemic risks.*

*Second, although some systemic elements have been embedded in the “Basel III” framework, experience in implementing macroprudential policies is scarce and implementation is highly dependent on national circumstances, i.e. legal mandates and feasibility as well as authorities’ readiness to act.*

*Third, in addition to the newly established European Systemic Risk Board (ESRB), some European (as well as non-European) countries have made considerable progress in establishing national systemic risk boards with extended legal rights and responsibilities for macroprudential regulation and supervision. Austria is lagging behind in this respect, and the legal mandate of regulatory and supervisory authorities remains vague and is largely restricted to monitoring financial stability.*

*Besides giving an overview of the current discussion on macroprudential regulation and supervision, this paper provides an analysis of the state of play in Austria as well as some proposals to improve the current macroprudential framework.*

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## 1 Introduction

The macroprudential approach to regulation and supervision has attracted much attention recently, with the latest financial crisis unmasking deficits in this area (Clement, 2010). Microprudential regulation and supervision, on the other hand, has been in the spotlight in the last years if not decades, but the systemic aspect of financial stability policy has been neglected.<sup>2</sup> Adjustments at the microeconomic level by and large build on existing supervisory structures. By contrast, macroprudential regulators and supervisors endeavor

to better capture systemic risks and, above all, to set corresponding measures pretty much on new terrain (Brunnermeier et al., 2009; Galati and Moessner, 2011).

This paper aims to describe issues related to macroprudential risk identification, risk assessment and risk prioritization as well as the implementation of policy measures within the national framework. In macroprudential regulation and supervision, a distinction will be made between measures which remain restricted to the national level

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<sup>2</sup> Neglecting macroprudential supervision was only one aspect of the latest financial crisis, however, as microprudential standards for capital requirements and liquidity positions also turned out to be inadequate (Bank of England, 2009).

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and measures which are drafted at the European<sup>3</sup> and global<sup>4</sup> level and have to be implemented nationally.

The structure of the paper is as follows: Section 2 gives an overview of the theoretical background, definitions of systemic risks and macroprudential regulation and supervision, and the latter's relation to macroeconomic (i.e. fiscal and monetary) policy and microprudential regulation and supervision. The third section provides a proposal to increase the quality of regulation (i.e. via impact assessments). Sections 4 and 5 summarize the current, rapidly evolving debate on systemic risk identification and macroprudential tools. Section 6 deals with the legal mandate and institutional setting in Austria and elsewhere. Finally, section 7 concludes, pointing to the challenges ahead as well as providing a proposal for the institutional setting of macroprudential regulation and supervision in Austria.

## 2 Theoretical Background

### 2.1 Definition and Objectives of Macroprudential Regulation and Supervision

A consensus on the definition and objectives of macroprudential regulation and supervision has yet to be reached, but the following aspects are found repeatedly in the literature about this concept: It addresses risks to the financial system as a whole and, in conjunction with microprudential regulation and supervision, is supposed to ensure financial stability, i.e. smooth financial intermediation (efficient allocation of funds, functioning payment systems, risk insurance). The objectives of macroprudential regulation and supervision

comprise two key components: The first is to reduce the buildup of systemic risks and to have market participants internalize such risks (i.e. incorporate them in their decisions) as much as possible. The second is to strengthen the financial system's resilience to adverse shocks and economic downturns and therefore reduce the social costs of systemic risk materializations (Bank of England, 2009; CGFS, 2010b; Clement, 2010; Galati and Moessner, 2011).

According to the ESRB Regulation,<sup>5</sup> systemic risk is defined as "the risk of disruption in the financial system with the potential to have serious negative consequences for the internal market and the real economy. All types of financial intermediaries, markets and infrastructure may be potentially systemically important to some degree."

### 2.2 The Causes of Systemic Risks

The financial crisis had both exogenous (e.g. a low interest rate landscape combined with global imbalances; the regulatory environment) and endogenous causes (i.e. market failure).

Four types of market failure and the resulting distortions of economic incentives give rise to systemic risks: (1) information asymmetries (moral hazard, adverse selection), (2) externalities, (3) (mispricing of) public goods, and (4) (abuse of) market power. The financial system is specifically prone to the first two types, which, together with specific features, such as illiquid assets, maturity transformation and leverage, played a decisive role in the recent financial crisis. A typical case of asymmetrical information is seen when

<sup>3</sup> For instance by the newly established European Systemic Risk Board (ESRB) and three European Supervisory Authorities (ESAs).

<sup>4</sup> For instance by the Bank for International Settlements (BIS), the Financial Stability Board (FSB) and the IMF.

<sup>5</sup> Regulation (EU) No 1092/2010 of 24 November 2010, Article 2.

nonrisk-adjusted pricing of loans attracts borrowers whose risk is underpriced and puts off those whose risk is overpriced (adverse selection). Another typical information-related problem stems from (nonrisk-adjusted) deposit guarantees. A bank which offers higher interest on deposits will attract more customers, without the latter having proper incentives to adequately monitor risk. The bank, however, has an incentive to take excessive risks (moral hazard). Before the crisis, many securitization structures were a key example of information asymmetries and the resulting distortions of economic incentives. The originators of securitizations had both a positive incentive to sell securities and a negative incentive to select and monitor borrowers bundled in the securitization structure. Investors, on the other hand, had too little information to adequately assess the quality of the securities. The role of rating agencies and their incentive structures further exacerbated this problem. In addition to asymmetrical information, externalities were responsible for the financial crisis. The most prominent were liquidity spirals, which arose from the emergency sales of assets with adverse effects on the balance sheets of banks that were initially less severely affected. This was related to informational externalities when, for instance, doubts about a given bank's creditworthiness also created doubts about similar banks, an entire banking system or even an entire region (e.g. Central, Eastern and Southeastern Europe in spring 2009, or the so-called euro periphery countries in spring 2010). Financial stability may be interpreted as a public good, whose consumption is beneficial for banks, other

financial intermediaries as well as households and enterprises but does not entail additional costs. This provides incentives for the excessive consumption of financial stability, i.e. excessive risk taking. Concerns about market power come into play primarily in the aftereffects of a financial crisis if the remaining banks win a larger slice of the market. The relationship between competition and financial stability is not clear-cut, however.<sup>6</sup>

Systemic risks can also arise due to regulatory failures if interventions in markets provide distorted incentives or address market failures inadequately and/or even amplify such failures (CEBS, CEIOPS and CESR, 2008). Also, monetary policy measures and their influence on market participants might be at odds with financial stability objectives. For instance, as low key interest rates may subsidize debt capital in the financing of various economic sectors, they could result in the excessive indebtedness of households and enterprises, banks and other financial intermediaries. Banks' excessive maturity transformation is also related to this phenomenon. According to another empirically backed hypothesis, monetary policy decisions are an important signal for market participants' perception and tolerance of risk, which in turn has a corresponding effect on risk composition and asset prices, as well as on the costs and conditions of financial transactions (CGFS, 2010b).

There are two dimensions of systemic risk: the cross-sectional and the time dimension. On the one hand, the cross-sectional dimension stems from the accumulation of one or several of the aforementioned types of market

<sup>6</sup> For a general discussion of market failures, see Bank of England (2009), Brunnermeier et al. (2009) and Trichet (2009); for specifics of the relationship between competition and financial stability, see Allen and Gale (2003).

and/or regulatory failure: Market participants (possibly several similar market participants) jeopardize other market participants by being connected to each other either due to similar exposure or direct balance sheet links. Such network risks and aggregated risks can affect banks, the financial market and the economy as a whole. International interconnections are an additional dimension in this regard. On the other hand, economic cycles and the reaction of market participants determine the time dimension of systemic risk. In the upturn of an economic cycle, banks and other financial intermediaries, as well as enterprises and households, become overly risk taking and therefore overexposed to aggregate risk as credit is amply available and asset prices, leverage and maturity mismatches increase rapidly. In a downturn, by contrast, they become excessively risk averse amid sharp drops in asset prices, widespread deleveraging and credit rationing (Bank of England, 2009; FSB, IMF and BIS, 2011; Galati and Moessner, 2011). The separation of network risks, aggregated risks and the financial system's procyclicality is of a theoretical nature in order to facilitate debate. In reality, they overlap/strengthen each other: the repricing of credit risks that were underestimated in an upturn can necessitate the sale of assets in a downturn (procyclicality), which may then impact on the asset prices (and asset as well as funding liquidity) of other market participants (network risk).

### **2.3 Macroprudential Regulation and Supervision in Relation to Its Microprudential Counterpart and Macroeconomic Policy**

*Macroprudential regulation and supervision* fills the gap between microprudential regulation and supervision of individual institutions and macroeconomic

policy, while there is also some overlap (Bank of England, 2009).

*Microprudential regulation and supervision* concentrates on whether the individual bank (or other financial intermediary) is adequately solvent and – even if this was to a large extent neglected before the financial crisis – liquid. In line with the aforementioned types of market failure, the microprudential approach to financial oversight thus focuses on the problem of asymmetrical information within a bank and its consequences.

Although *macroeconomic policy* usually has an impact on financial stability, it is meant to achieve other goals. Monetary policy is targeted at stabilizing the price developments of goods and services, and fiscal policy might affect, or try to influence, demand and distribution. The objective of macroprudential regulation and supervision of smooth financial intermediation is very often complementary to the objectives of monetary policy: without a stable price environment, financial markets do not function efficiently. Without financial stability, price stability is also more difficult to ensure – at least over a sufficiently long time horizon (CGFS, 2010b). However, as already mentioned in the previous section, there are also potential instances of conflict between macroprudential and monetary objectives. In pursuing price stability by setting interest rates, monetary policy might fuel an asset price bubble or cause its burst, and by that trigger a systemic risk event. This conflict is also visible in the current situation (spring 2011), where increasing inflation rates call for interest rate hikes that might jeopardize the financial system's recovery.

To be able to identify risks and respective measures, macroprudential regulators and supervisors have re-

quirements that are similar to those of monetary policymakers. Monitoring macroeconomic trends and financial market developments as well as their interaction also makes a similar approach necessary. On the other hand, macroprudential measures would frequently be based on microprudential instruments. Owing to their long-standing expertise in macroprudential financial stability analysis and given their involvement in microprudential supervision (either through direct responsibility or through ties with supervisory authorities), central banks should be assigned a key function in macroprudential regulation and supervision, where direct access to the monitored institutions must remain guaranteed (Bank of England, 2009; Brunnermeier et al., 2009; CGFS, 2010a and 2010b; Group of Thirty, 2010).

### 3 Impact Assessments as a Framework for Macroprudential Supervision

As macroprudential regulation and supervision is a relatively new field with little experience so far, and is also maneuvering in a potentially more discretionary manner (compared with microprudential supervision), policymakers will face increased challenges in terms of quality, consistency, accountability and transparency. In light of this, some institutions in Europe have identified and implemented impact assessments (IAs) as a suitable tool at both the national and the supranational level. IAs in this context include not only the analysis of potential repercussions of regulatory changes for different market participants in both the financial market and the real economy. They also cover the overall process from the identification of risks, the determination of market failures and systemic risks, the setting of policy goals, the

drafting of regulatory options to the assessment of the impact of these options, final recommendations for policy action as well as follow-up assessments. Moreover, IAs must also cover the effects of microprudential measures on the incentive structures of market participants and any arising systemic risks.

An outline of the typical ideal course for action is presented below. Although a large portion of macroprudential regulatory measures is given exogenously (especially by the ESRB, the ESAs and the European Commission), national authorities can nevertheless assess these measures or consider either alternatives by a stricter interpretation or complementary measures.

Basing macroprudential measures on an IA process facilitates argumentation and justification vis-à-vis market participants and peer institutions at the national, European and international level.

The following depicts a synopsis of the stages of typical IA processes proposed e.g. by CEBS, CEIOPS and CESR (2008) and the European Commission (2009):

#### 1. Identification of systemic risk

The initial stage consists of the identification of a specific systemic risk. Here, assessing the failure of market mechanisms and the adequacy of the prevailing regulatory framework is most important.

Various macroprudential tools of analysis and indicators (see the following section 4) are used to identify suspect cases, which are then subjected to an assessment of the market failure and/or regulatory failure. Conducting an economic assessment that verifies to what extent which types of market failures exist is an important basis for determining systemic risk classified as network risk, aggregated risk or procyc-



clical risk. The outcome of the first stage should at least be a first assessment of the effects under a no change policy.

This stage of assessing systemic risk also includes the identification of the affected market participants (banks, other financial intermediaries, enterprises, households, the government, etc.). To obtain a more complete picture of the problem, inputs of various market participants (e.g. the Austrian Federal Economic Chamber, the Austrian Federal Chamber of Labour, academic experts and federal ministries) should be gathered in a consultation procedure.

So far, central banks and regulatory authorities have acquired some expertise in the identification of systemic risks, but there is still room for improvement. By contrast, execution of the following stages is far less tested and will also require quite a few resources (depending on the scope of the problem). Therefore a formal decision by management is required on whether an identified risk is deemed important enough to trigger the following stages.

#### 2. *Setting regulatory objectives*

There are basically three levels of objectives: general objectives, specific objectives and operational objectives. General objectives can be market confidence, financial stability, functioning payment and settlement systems as well as consumer protection. Specific objectives might, for instance, be ensuring proper solvency and liquidity of market participants, enhancing informational standards, reducing competitive distortions, reducing excessive leverage, enhancing risk perception and reducing asset price

bubbles. Operational objectives concern measures put into place to reach specific objectives, which then serve general objectives. Examples are increasing the risk weights of certain types of exposures, introducing maximum loan-to-value ratios, formulating specific rules for market and credit risk models or improving the content of prospectuses. The operational objectives already lay the ground for the following stage.

#### 3. *Drafting macroprudential policy options*

Here, the aim should be to propose several options for action, which are then evaluated at the next stage. By default, the set of potential policy measures should include both the maintenance of the status quo and the market solution.

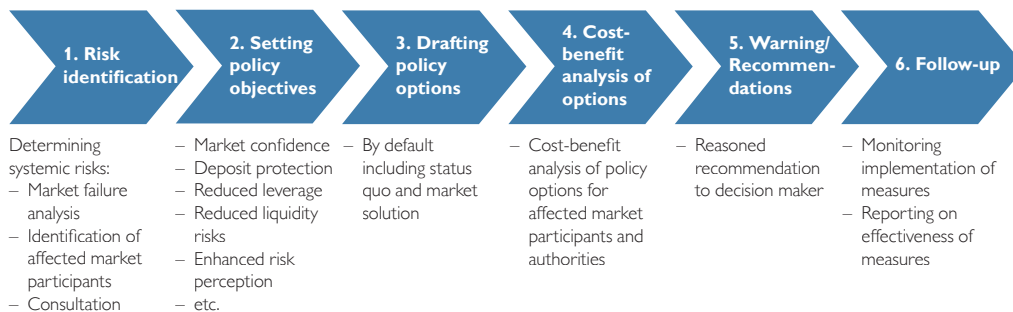
Quite often policy measures will be exogenously given by EU legislation. National authorities can nevertheless assess the given policy measures or consider alternatives in the sense of stricter or complementary measures. Here, recourse to the first two stages is necessary to be able to draft effective policy options.

#### 4. *Cost-benefit analysis of policy options*

In this stage, the economic impact of different regulatory options on market participants and their suitability for achieving goals is assessed on the basis of both quantitative and qualitative criteria. This includes the estimation of the costs and benefits for market participants and authorities, as well as a comparison of these options. It might be the case that a single policy option emerges as the preferred one, but it might also be the case that a policy mix promises the best outcome in achieving the regulatory objectives.

Chart 1

## Macroprudential Regulation and Supervision: Impact Assessment Process



Source: OeNB.

### 5. Recommendation to decision makers

Recommendations to decision makers should not only list arguments for proposed regulatory measures but also contain a description of the opinion formation process. Part of this stage can, but need not, be the publication of recommendations and an act-or-explain mechanism targeting the relevant market participants.

### 6. Follow-up

The follow-up is concerned with assessing the effectiveness of the measures and, if necessary, proposing new measures, within a given time period after implementation.

## 4 Identification and Assessment of Systemic Risks

The identification of macroprudential risks has been relatively well established in the previous decade (e.g. by Financial Stability Reports of quite a few central banks, the ECB and the IMF, but also by IMF Article IV consultations and Financial Sector Assessment Programs). For instance, years before the latest financial crisis, the risks of subprime mortgages and foreign currency loans were already repeatedly the subject of debate (IMF, 2009 and 2010a).

The financial crisis has brought research on systemic risk a fresh impulse for developing suitable methods to determine risk drivers and to assess their relevance. One of the biggest challenges in identifying systemic risks consists in two things: First, distilling the various different tools of analysis and indicators into an overall perspective on risks to the financial system, and, second, drawing the right conclusions from the identification of macroprudential risks in the implementation of macroprudential measures (for the latter, see section 5). The IMF's vulnerability exercise for advanced economies (as part of an early warning exercise in September 2010) offers an approach that could be used as an inspiration for a financial stability map for Austria, which provides an aggregated overall indicator value for financial stability as well as several subindicators for sectors of the economy and grades the stability situation as "slightly risky," "of middling risk" or "highly risky" (IMF, 2010c).

As a main policy issue, the Financial Stability Board (FSB), the IMF and the BIS are currently working on identifying important data gaps for an effective diagnosis of systemic risks. The focus is in particular on: (1) the interlinkages between large, global systemically im-

portant institutions; (2) emerging concentrations of risk in terms of both exposures to, and funding dependencies on, certain institutions, countries and financial sectors; (3) the transfer and ultimate holding of risk; (4) system-wide leverage and maturity mismatches; and (5) international financial integration through cross-border banking and investment flows. Separately, the BIS and the CGFS are pursuing improvements to the BIS' international banking statistics, which will help better analyze the transmission of funding and other shocks across countries through the banking system (FSB, IMF and BIS, 2011).

Further key tasks will involve the assessment of network effects, the further development of stress testing and the extension of the supervisory scope to nonbank financial intermediaries. In particular, valid data are a critical factor in the practical implementation of network analysis. A line of research focuses strongly on market data (e.g. Acharya et al., 2010; Giesecke and Kim, 2010; Yang and Zhou, 2010) although these are useable primarily in capital market-based economies and here, owing to their short forecasting horizon, particularly in crisis management. The EU-wide CEBS/ECB stress testing exercise of spring/summer 2010 and its successor in 2011 have been pointing the way ahead for stress testing. In addition, macroeconomic stress tests will also help inform policymakers' judgment about the stage of the financial cycle. Lately, work on network analysis has also progressed considerably (e.g. Garatt et al., 2011).

Significant research is also underway to better model the interactions between the real economy and the financial sector by developing a methodology for the identification of banks that are systemically important from a

global perspective. As part of the overall identification process, benchmark indicators reflect robust measures of the different factors that drive financial firms' systemic importance, namely their size, the degree of their interconnectedness with other financial firms and the degree to which they provide specialized services for which there are few substitutes. They also include measures of a bank's participation in international markets (e.g. FSB, 2010a, 2010b and 2010c).

## 5 Macprudential Instruments

The objective of macroprudential instruments is to reduce identified systemic risks to the financial system. Macroprudential regulation and supervision is situated in a tradeoff between rules and discretion (Bank of England, 2009; Brunnermeier et al., 2009):

- Hard rules make policy measures predictable. They facilitate supervisory authorities' task to lean against the wind in an upturn and reduce the risk of regulatory capture. Given the continued paucity of experience with hard macroprudential rules, however, there is still much uncertainty surrounding their feasibility and effectiveness.
- By contrast, full discretion allows supervisory authorities to respond to structural change arising from technological progress or new behavior by market participants. Full discretion provides macroprudential supervisory authorities with the opportunity to learn about the effectiveness and interdependency of their measures and to adjust them accordingly. Full discretion, however, heightens uncertainty for regulated entities, which could increase the costs for financial intermediation and reduce the effectiveness of the macroprudential



measures. The risk of regulatory capture and the challenge of leaning against the wind increase with the degree of discretion.

Naturally, hard rules and full discretion provide the theoretical edge cases. In reality regulation and supervision will fall somewhere in between – including a “guided discretion” approach, which is, for instance, provided for by the proposals of the Basel Committee on Banking Supervision (BCBS) regarding countercyclical capital buffers (explained at the end of the following paragraph).

While the identification of systemic risks (see section 4) is somewhat more advanced due to past experience in financial stability analysis, new ground is being broken with macroprudential measures. In the proposals made by the FSB and the BCBS (2010b and 2010c), microprudential instruments were adapted inasmuch as they now account for systemic risks realized in the financial crisis within banks’ capital and liquidity requirements (i.e. higher-quality capital, more stringent capital requirements for trading book, derivative and securitization exposures, leverage ratio, liquidity coverage ratio, net stable funding ratio). Capital conservation buffers and countercyclical capital buffers are designed to address the problem of the cyclical nature of banking. The countercyclical capital buffer adopted in Basel III is a notable example of a new regulatory initiative that draws on advancements in the toolkit to tackle systemic risks. The so-called buffer guide will form the starting point for discussions on when to activate the buffer in each national jurisdiction. The process of calibrating the buffer will be supported by a broad range of simple indicators, which are already currently used in financial stability assessments, such as macroeco-

nomical conditions, balance-sheet indicators and/or information from market prices (BCBS, 2010c).

Furthermore, many other measures are still on the drawing board. The other proposals include bail-in and liquidation plans (“living wills”), contingent capital, systemic capital premiums and systemic risk taxes, systemic liquidity premiums, the consolidation of financial infrastructure (especially central counterparties), the expanded disclosure of risk positions, restrictions in the leveraging of nonbanks (e.g. margin requirements in repo markets, loan-to-value and loan-to-income limits for private sector loans), dynamic risk provisioning and risk-based deposit guarantees. Last but not least, softer measures that had been implemented in Austria (and elsewhere) already before the crisis, such as providing information and recommendations by supervisory authorities as well as disclosure and reporting duties, also belong to the macroprudential toolkit (Bollard, 2011; Brierley, 2009; BCBS, 2010a; CGFS, 2010a; FSB, 2010a, 2010b, 2010c and 2011; Financial Stability Forum, 2008; ECB, 2010; IMF, 2010c and 2011b; Saurina, 2009; Turner, 2011).

A further challenge of macroprudential regulatory policy lies in its interaction with monetary policy, as the effectiveness of instruments in both policy areas can strengthen or weaken each other. Prior to the crisis, the general prevailing consensus was that monetary policy should focus on price stability alone (BCBS, 2010a). In addition to key interest rates, central banks worldwide have, however, used many unconventional measures in managing the financial crisis. Since monetary policy measures influence both the real economy and the financial economy, some economists are calling for the inclusion of systemic risk indicators

(asset price bubbles, leverage, etc.) in the setting of monetary policy instruments (e.g. Borio and White, 2004; Gruen et al., 2003; Jeanne and Korinek, 2010; Angeloni and Faia, 2010). The rules governing the ESRB, however, provide for a strict separation between macroprudential and monetary policy measures.

Work is underway in the ESRB regarding macroprudential instruments that aim at bolstering the resilience of the financial system to decrease the probability that systemic risk materializes and to mitigate the impact of such a materialization on the real economy. Further work has to be carried out

regarding the motivation for authorities to implement certain instruments, the calibration of the instruments, experiences of national authorities, the effectiveness and (possible) side effects of instruments (a major issue), and the legal obstacles, also against the background of the EU single market. This work will be complemented by the results of the current ESCB macroprudential research network “MaRs”.

In the following, Box 1 deals with Pillar 2 of the Basel Capital Accord and its suitability for implementing macroprudential measures, and Box 2 with foreign currency loans in Austria.

Box 1

### **Pillar 2 – A Statutory Framework for Implementing Macroprudential Instruments**

*The key objective of Pillar 2 of Basel II, i.e. the supervisory review process (SRP), is to identify banks' overall risk and the major factors influencing banks' risk situation and to acknowledge the latter in terms of banking supervision. In other words, the SRP complements the quantitative minimum capital requirements specified under Pillar 1 by including a qualitative component: a bank's risk-bearing capacity is evaluated against its overall risk profile while all risks are being taken into account. Pillar 2 thus corresponds to the model of principle-guided supervision, whereas Pillar 1 is rule based.*

*In general, Pillar 2 is meant to fulfill two key functions. First, new elements of microprudential banking supervision can be integrated here – particularly under an international accord – and could then later be moved to an expanded Pillar 1. The introduction of an explicit leverage ratio as called for in the G20 communiqué of September 2009 is one such example. Second, Pillar 2 could in principle play an independent role in macroprudential supervision, too. This would, however, require modifications in the legal framework for the use of macroprudential tools dealing with systemic risk. In any case, there is a clear need for bolder action by supervisory authorities in taking discretionary decisions based on Pillar 2 of Basel II.*

*At present, Pillar 2 is a matter between the individual firm and its supervisor (Article 69 Austrian Banking Act). As there is no public disclosure, there is little pressure for convergence in supervisory approaches across jurisdictions since no third party can assess the relative effectiveness of any supervisory authority's approach to Pillar 2. As pointed out by the Financial Supervisory Authority (FSA, 2009), such an approach is not without drawbacks. It would change the nature of the Pillar 2 process if firms and supervisors operated in the knowledge that the outcome would be published. Moreover, the current crisis has clearly exposed deficiencies of market discipline. It is not clear to what extent relaying Pillar 2 information would therefore increase market discipline; any disclosures would have to involve significant contextual information to prevent misinterpretation.*

*Greater transparency would, however, allow both market participants and official bodies (such as the IMF, the FSB, the ESRB and the BCBS) to assess the credibility of their assumptions as well as major banks' resilience to a range of downside scenarios. Supervisors, in contrast, would be urged to deliver robust and consistent Pillar 2 outcomes. Finally, transparency could be complemented by an act-or-explain mechanism used as an enforcement tool for national authorities compelling individual institutions to act unless inaction can be adequately justified.*

Box 2

### Foreign Currency Loans and Repayment Vehicle Loans in Austria

The second half of the 1990s saw demand for foreign currency loans soar in Austria. By the early 2000s, nonfinancial corporations, in addition to households, also registered steep growth in their demand behavior. From this time onward, the OeNB started to warn of the risks stemming from this form of financing in its Financial Stability Reports (e.g. Waschiczek, 2002). In April 2003, the OeNB published a study on the risks arising from foreign currency loans (Boss, 2003). In October 2003, the FMA published Minimum Standards for Granting and Managing Foreign Currency Loans as well as Minimum Standards for Granting and Managing Loans with Repayment Vehicles. In the Financial Stability Assessment Program (FSAP) 2003, the IMF likewise pointed to specific risks arising from foreign currency loans in Austria.

This initial set of measures succeeded in significantly reducing the importance of loans in Japanese yen and curbing the proliferation of foreign currency loans in corporate financing. In addition, banks' risk management systems by and large improved significantly regarding foreign currency loans and repayment vehicle-linked loans. Household demand for foreign currency loans (with repayment vehicles) in Swiss francs remained high, however.

In mid-2006, the OeNB and the FMA, in collaboration with the Austrian Federal Economic Chamber, published an information leaflet on the risks arising from foreign currency loans, which was launched for the first time at Austrian banks in 2006. Growth in foreign currency loans to households fell slightly after that, but in terms of volume and share, it reached its peak as late as October 2008.

In October 2008, the FMA issued a recommendation to banks to stop granting foreign currency loans to households. Subsequently, the OeNB and the FMA drafted an Extension of the FMA Minimum Standards for Granting and Managing Foreign Currency Loans and Loans with Repayment Vehicles, which was published in March 2010. These measures have had a major impact. Since fall 2008, foreign currency loans have fallen steadily and this decline has accelerated considerably since April 2010.

In the decade up to the recent financial crisis, some market participants were generally resistant to regulatory measures addressing foreign currency and repayment vehicle loans, partly under the misconception that the OeNB did not profit from, or even suffered some kind of loss due to, the prevalence of foreign currency loans and therefore had an interest in reducing their volume. With some financial service providers, in particular, backing this argument, it cropped up again and again in public debate. Similar arguments were used at times against commercial banks which spoke out against foreign currency loans.

Even though the supervisory authorities had finally found a (to date) effective means to combat the proliferation of foreign currency loans and repayment vehicle-linked loans granted to households, there first needed to be a crisis (with resulting public support) to implement it in the Austrian financial market, although the risks had already been identified and analyzed at a much earlier stage. Given the large number of softer pre-crisis measures, Austrian supervisors had, however, to a certain extent already proven their ability and regulatory competence to lean against the wind.

## 6 Institutional Setting

Macroprudential regulation and supervision is faced with challenges similar to those confronting monetary policy (monitoring broad macrofinancial and macroeconomic developments, their interactions and resulting economic policy measures). Macroprudential measures are, however, frequently likely to be implemented with micro-

prudential tools, which may not yet be provided for by law and thus may have to be adapted (CGFS, 2010).

### 6.1 Macroprudential Mandates in Austria and Elsewhere

In Austria the legal mandate for macroprudential policy is still relatively vague and does not contain any explicit statutory authorization to use macropruden-

tial instruments. The OeNB is obligated to monitor financial stability (Article 44b Nationalbank Act). The FMA must consider financial stability in its activities (Article 3 Financial Market Supervision Act). The Financial Market Committee serves as a platform for institutions which are jointly responsible for financial stability – the OeNB, the FMA, the Ministry of Finance (Article 13 Financial Market Supervision Act). Making the legal mandate for macroprudential policy more specific might increase supervisory authorities' scope for action in this area. In several countries considerable progress has been made in putting the mandate for macroprudential regulation and supervision on a sounder footing, and they already have (or will set up) macroprudential councils: examples are the Financial Stability Oversight Council (FSOC) in the U.S.A., the Systemic Risk Oversight Committee (Switzerland), the Macro-Financial Committee (New Zealand) and the Financial Regulation and Systemic Risk Council (France).

In the U.K., the government proposed a major overhaul of the financial regulation system that includes the establishment of a Financial Policy Committee (FPC) in the Bank of England. The FPC will have the legal mandate to identify and assess systemic risks and to use the levers and tools at its disposal to address those risks. Such tools will range from public pronouncements and warnings, a broad power of recommendation (backed up by a comply-or-explain mechanism) to a power of direction over the regulators (i.e. the Prudential Regulation Authority and the Financial Conduct Authority) to implement certain macroprudential tools. According to the U.K. govern-

ment, this reform is designed to address the failings of the former tripartite approach, where responsibility for financial stability was split between the Bank of England, the Financial Services Authority and the Treasury.<sup>7</sup>

At the EU level, the establishment of the European Systemic Risk Board (ESRB) as the new independent macroprudential oversight body has made macroprudential regulation and supervision one of the top agenda items in the EU regulation process. However, in contrast to e.g. the U.S.A.'s FSOC and the U.K.'s FPC, the ESRB has no legally binding powers.

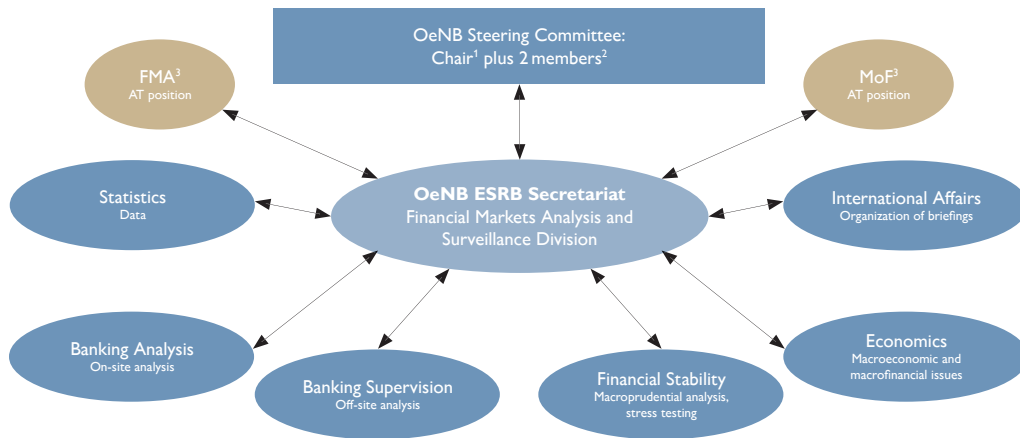
Besides these bodies, the FSB and the Committee on the Global Financial System (CGFS) at the BIS work on moving the macroprudential agenda forward at the international level. The work of the ESRB will tie in with the work of all relevant macroprudential institutions both within and outside of the EU.

As reasoned in the Group of Thirty Report (2010), there are several strong arguments in favor of granting macroprudential supervisory power to a country's central bank or anchoring a new macroprudential supervisory vehicle or committee within a country's central bank. Central banks already possess much of the expertise and institutional capacity required to implement macroprudential policy as well as the institutional reputation required to implement such policy. In a recent paper, the IMF (2011a) also argued for a prominent role of the central bank in macroprudential policymaking. The IMF also made the case for a well-identified macroprudential authority with a clear mandate and objectives, and with adequate powers and accountability. It also pointed out that a cooperative and

<sup>7</sup> For more details on the discussion in the U.K., see e.g. *HM Treasury (2011)*.

Chart 2

### The OeNB's Internal ESRB Production Network



Source: OeNB.

<sup>1</sup> Chair: Director of the Financial Stability and Bank Inspections Department (OeNB).

<sup>2</sup> Members: Director of the Statistics Department, Director of the Economic Analysis and Research Department (OeNB).

<sup>3</sup> In addition to the various OeNB business areas, the Financial Market Authority (FMA) and the Ministry of Finance (MoF) provide the OeNB's ESRB Secretariat with input.

coordinative body or formal mechanism is necessary to ensure consistency across different policy areas.

### 6.2 Implications of the ESRB for Austria

The ESRB's establishment in early 2011 has triggered increased sector-wide financial stability analyses at both the EU and the national level. These analyses will include assessments of the impact of warnings and recommendations for action issued by the ESRB on the Austrian banking, insurance and securities sectors, the drafting of statements (by the Austrian Federal Ministry of Finance, the FMA and the OeNB) issued on behalf of Austria as well as the conduct of follow-up activities (by the FMA and the OeNB) concerning the effectiveness of the measures adopted.

In order to cover the broad spectrum of ESRB topics, a virtual ESRB secretariat modeled on the ESRB's own structure was set up at the OeNB as an information and discussion platform for

handling the ESRB-related tasks. This internal ESRB secretariat is composed of an expert each on financial stability, economics and statistics, who contribute their respective technical expertise. In addition, the FMA is represented in the secretariat in order to cover the microprudential perspective and the developments concerning the European Banking Association (EBA). The secretariat reports to the OeNB Steering Committee consisting of the Directors of the Financial Stability and Bank Inspections, the Statistics, and the Economic Analysis and Research Departments, who provide guidance on the OeNB's analytical focus in the ESRB context.

### 7 Conclusions and Challenges Ahead

Implementing effective macroprudential policy frameworks at the Austrian, EU and international levels is associated with a number of challenges.

First, although the sphere of risk identification and risk assessment is by



far the most advanced owing to long years of experience in financial stability analysis, there is still room for improvement, particularly in the assessment of network effects, the fine-tuning and further development of (macro) stress testing and the expansion of the supervisory scope to include nonbank financial intermediaries. What is more, one of the major challenges is to distill the findings from various analytical instruments and indicators into an overall consistent perspective on risks to the financial system.

Second, as for macroprudential measures, practical experience in this area is almost entirely lacking. Microprudential instruments (capital and liquidity requirements) were adapted inasmuch as they now account for some of the systemic risks exposed by the latest crisis, and capital conservation buffers and countercyclical capital buffers are being introduced to address the cyclical nature of banking. More far-reaching measures are still at different stages of planning or under discussion and their applicability very much depends on national (legal) circumstances.

Institutionally, together with the ESRB, national (systemic) risk boards that have yet to prove themselves in practice were established in some EU countries. In most countries (including Austria), the legal mandate is, however, relatively vague and largely limited to *monitoring* financial stability. Other countries have already established, or are currently making progress in establishing, national systemic risk boards with extensive legal mandates, though.

One of the difficulties will be that, in the face of financial sector evolution and innovation, the mandate should offer sufficient room for maneuver. Another challenge is to develop a clear and comprehensive definition of macropru-

dential oversight. In addition, an adequate macroprudential mandate should also include (so far) nonregulated market participants and/or infrastructures.

Some of the major challenges for the ESRB as the single voice for EU financial stability will be the development of a macroprudential policy framework in the medium term and to coordinate instruments at the EU level, access to micro data collected by the ESAs especially for the conduct of top-down stress tests, high-quality and unbiased analyses as well as specific and well-targeted communication of risk warnings and recommendations by using the authority and integrity of the ESRB. Also, at the EU level, the use of macroprudential tools remains an open issue as there is to date only very limited empirical analysis of the effectiveness of tools, which could guide the design of macroprudential tools. By extension, the calibration of existing or new instruments is likely to be difficult. It is important that the framework will allow macroprudential supervisors at the national level sufficient flexibility and a wide range of macroprudential instruments to address systemic risk.

In Austria, the Financial Market Committee (FMC) could serve as a risk board. Under Article 13 Financial Market Authority Act, the FMC already has a legal mandate to “promote cooperation and the exchange of views [...] between institutions with joint responsibility for financial stability,” i.e. the Austrian Federal Ministry of Finance, the FMA and the OeNB. The FMC would submit macroprudential measures as recommendations relating to financial matters to the Austrian legislature. The responsibility for macroprudential risk analysis, the resulting options for action and their impact analysis would be assigned to the OeNB. The OeNB has extensive ex-

expertise in financial stability issues, and is a member of the ESRB and its sub-structures. In this regard, the impact assessment process discussed in section 3 would provide a suitable framework to ensure the quality, consistency and transparency of the policymaking process also at the OeNB. The responsibility for assessing legal implementation issues of policy measures would be with the FMA. As for coordination between the OeNB and the FMA, two forums are already in place: the Risk Workshop<sup>8</sup> would be suitable for identifying risks and the Coordination Forum

(KOFO)<sup>9</sup> for discussing potential instruments to be used. However, all these proposals presuppose substantial adjustments in legal mandates, specifically when it comes to extended legal rights and responsibilities of a high-level macroprudential body (e.g. the aforementioned FMC), as proposed by various institutions and experts (e.g. Brunnermeier et al., 2009; FSB, 2011; Galati and Moessner, 2011; Group of Thirty, 2010; IMF, 2011b) and in line with the approach in the U.K. (HM Treasury, 2011), in Switzerland and other countries.

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<sup>8</sup> *The quarterly risk workshop is an internal platform at the OeNB allowing micro- and macroprudential experts to openly discuss risks relevant for the Austrian financial sector to identify risks at an early stage.*

<sup>9</sup> *This consultative forum convenes high-level representatives of the Federal Ministry of Finance, the FMA and the OeNB, who discuss and deliberate issues related to the Austrian financial system.*

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