March 2013
IMF Country Report No. 13/70

European Union: Publication of Financial Sector Assessment Program Documentation—Technical Note on Macroprudential Oversight and the Role of the ESRB

This financial sector stability assessment on the European Union was prepared by a staff team of the International Monetary Fund as background documentation for the periodic consultation with the member country. It is based on the information available at the time it was completed on February 22, 2013. The views expressed in this document are those of the staff team and do not necessarily reflect the views of the members of the European Union or the Executive Board of the IMF.

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International Monetary Fund
Washington, D.C.

FINANCIAL SECTOR ASSESSMENT PROGRAM

EUROPEAN UNION

MACROPRUDENTIAL OVERSIGHT AND THE ROLE OF THE ESRB

TECHNICAL NOTE

MARCH 2013

INTERNATIONAL MONETARY FUND
MONETARY AND CAPITAL MARKETS DEPARTMENT

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Glossary

ASC	Advisory Scientific Committee of the ESRB
ATC	Advisory Technical Committee of the ESRB
BCP	Basel Core Principles
BU	Banking Union
CCP	Central Counterparty
CEREP	Central Repository
COREP	Common Reporting
CRA	Credit Rating Agency
CRD	Capital Requirements Directive
CRR	Capital Requirements Regulation
CSD	Central Securities Depository
DGCOMP	EC Directorate General for Competition
DGECFIN	EC Directorate General for Economics and Finance
DGMARKT	EC Directorate General for the Internal Market and Services
DGS	Deposit Guarantee Scheme
EA	Euro Area
EBA	European Banking Authority
EC	European Commission
ECB	European Central Bank
EEA	European Economic Area
EEE	Emerging Economies in the EU
EFC	Economic and Finance Committee of the EU
EFFE	European Financial Stability Framework Exercise
EFSF	European Financial Stability Facility
EIOPA	European Insurance and Occupational Pension Authority
EMIR	European Market Infrastructure Regulation
EMU	Economic and Monetary Union
ESFS	European System of Financial Supervisors
ESIB	Systemically important bank in the EU
ESMA	European Securities and Markets Authority
ESRB	European Systemic Risk Board
EU	European Union
FSAP	Financial Sector Assessment Program
FSB	Financial Stability Board
GSIB	Global Systemically Important Bank
IMF	International Monetary Fund
JC	Joint Committee of the European Supervisory Authorities
MiFID	Market in Financial Instruments Directive
MoU	Memorandum of Understanding
NSIB	National Systemically Important Bank
SIFI	Systemically Important Financial Institution

EXECUTIVE SUMMARY

The role of macroprudential policy is to identify and reduce risks to financial stability, arising along both a time dimension and a cross-sectional dimension. Macroprudential policy relies on prudential instruments to (i) limit the buildup of financial imbalances; (ii) address the market failures related to risk externalities and interconnectedness between financial institutions; and (iii) dampen the procyclicality of the financial system.

Currently, national authorities in the EU are responsible for macroprudential oversight of their national financial system, but adequate frameworks are still lacking in many EU countries. Coordination and internalization of cross-border spillovers is achieved at the EU level by the European Systemic Risk Board (ESRB) through a (non-binding) 'act or explain' mechanism. In December 2011, the ESRB issued recommendations on the macroprudential mandates of national authorities. Guidance for establishing common macroprudential toolkits is being developed.

Macroprudential policies at a national level would need to be effective and efficient as well as be aligned with the overall objective of the internal market while protecting financial stability. This approach suggests that while the set of instruments available should be comprehensive enough to address multifaceted macroprudential concerns at national and EU levels, efficient coordination would be needed to limit possible negative externalities or unintended effects including on the integrity of the single market.

Coordination of national macroprudential policies is especially important in the EU context, given its highly integrated economic and financial markets. Such coordination would help identify correlated risks exposures of major EU financial institutions. The coordination is also important to minimize negative spillover effects of national policies, reduce the possibility of regulatory arbitrage, and foster policy effectiveness. But the ESRB still lacks formal modalities to coordinate macroprudential policy at the EU level.

The implementation of SSM will have important implications for the institutional setting of the macroprudential oversight in Europe. Within EMU, it is advantageous to assign macroprudential policy to both the ECB and national authorities, because strong monetary policy and macroprudential policy framework can be mutually reinforcing and the ECB will internalize cross-border effects within the BU. The established independence of the ECB would help build up a strong institutional framework for macroprudential policy and capacity to implement macroprudential instruments without undue political interference. National authorities should be provided a similar degree of operational independence and powers. The ECB and national authorities should be responsible for a wider range of macroprudential instruments, going beyond those included in the CRR/CRD IV.

Modalities for coordination of the ESRB as the EU macroprudential oversight body and the SSM among the participating countries need be devised. The ESRB would need to have legal powers and sufficient resources to be effective. While the SSM will comprise the euro-area and any opt-in countries, the ESRB encompasses the entire EU. Within the countries of the SSM, the ECB will appropriately have macroprudential powers and will closely coordinate with national macroprudential authorities. The ESRB should interact with the ECB on macroprudential toolkits when it takes on macroprudential responsibilities, as it will continue to do with national supervisors. The ESRB should be able to exercise its powers and issue recommendations to the ECB as it does to national authorities. To be effective, the ESRB would also need to improve its capacity for effective identification, analysis and monitoring of EU-wide systemic risks, supported by access to timely information on financial markets as well as individual financial institutions. The coordinating role of the ESRB should be further enhanced, through closer cooperation with the ESAs, as the scope of the ESRB goes beyond banking sector and covers the entire financial system, including all financial institutions (such as insurance and pension funds, market infrastructures and etc.), financial markets and products.

I. INTRODUCTION[1]

1. **EU context.** The ESRB was set up in January 2011, following the 2009 De Larosiere Report, which resulted in the establishment of the European System of Financial Supervision (ESFS), a network of national supervisors working in tandem with new European Supervisory Authorities (ESAs) and the ESRB. The reorganization of the European financial architecture was a response to the weaknesses in the EU financial supervisory framework that was exposed by the 2008 financial crisis, in particular with respect to the supervision of cross-border banks. Despite the highly integrated and interconnected financial systems and the importance of cross-border financial activities in the EU, supervisory and regulatory frameworks had remained fragmented along national lines. Moreover, there was little or no emphasis on macroprudential oversight and on a more integrated approach to financial stability, as each NCB (and the ECB) produced their financial stability analysis independently.

2. **Systemic crisis in the euro area.** The ESRB started to operate shortly before the euro area was engulfed by a systemic crisis arising from bank and sovereign risks interacting with architectural weaknesses. Uncoordinated actions resulted in a deep fragmentation of the EU financial system. Against this backdrop, the ESRB had to balance and prioritize activities between systemic risk warnings and policy recommendations on regulations and to correct medium-term risks while developing a macroprudential toolkit for the EU—an important task for the EU macroprudential oversight body. Given the deeply interconnected nature of the EU financial system, the ESRB has a role to play in promoting a more integrated approach to systemic risk and macroprudential policies, although the creation of the Banking Union (BU) will require a well designed division of labor between the ESRB and the SSM.

3. **The ESRB operates under a set of constraints that may hamper its effectiveness.** Constraints originate from the supra-national dimension of the ESRB, resulting in a complex decision making process, and its lack of binding powers. Resources are provided by the ECB and national authorities to support the activities of the ESRB. The ESRB has access to disaggregated data through the ECB and the ESAs, but no direct access to supervisory data. This may adversely affect its ability to assess systemic risks that may arise from large cross-border and interconnected financial institutions.

4. **The paper is organized as follows.** Section II is devoted to a description of ESRB activities and assessment of its effectiveness; Section III explores the choice of macroprudential toolkits for EU countries; Section IV explains how the macroprudential institutional landscape should be organized, including by giving a strong role to the ESRB in coordinating the use of macroprudential instruments across the EU and sectors of the

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[1] Prepared by Thierry Tressel (EURER) and Jianping Zhou (MCMSR).

financial system. It also discusses the respective roles and interaction between the ESRB and the SSM when the latter starts operating; and Section V concludes.

II. A Review of the ESRB

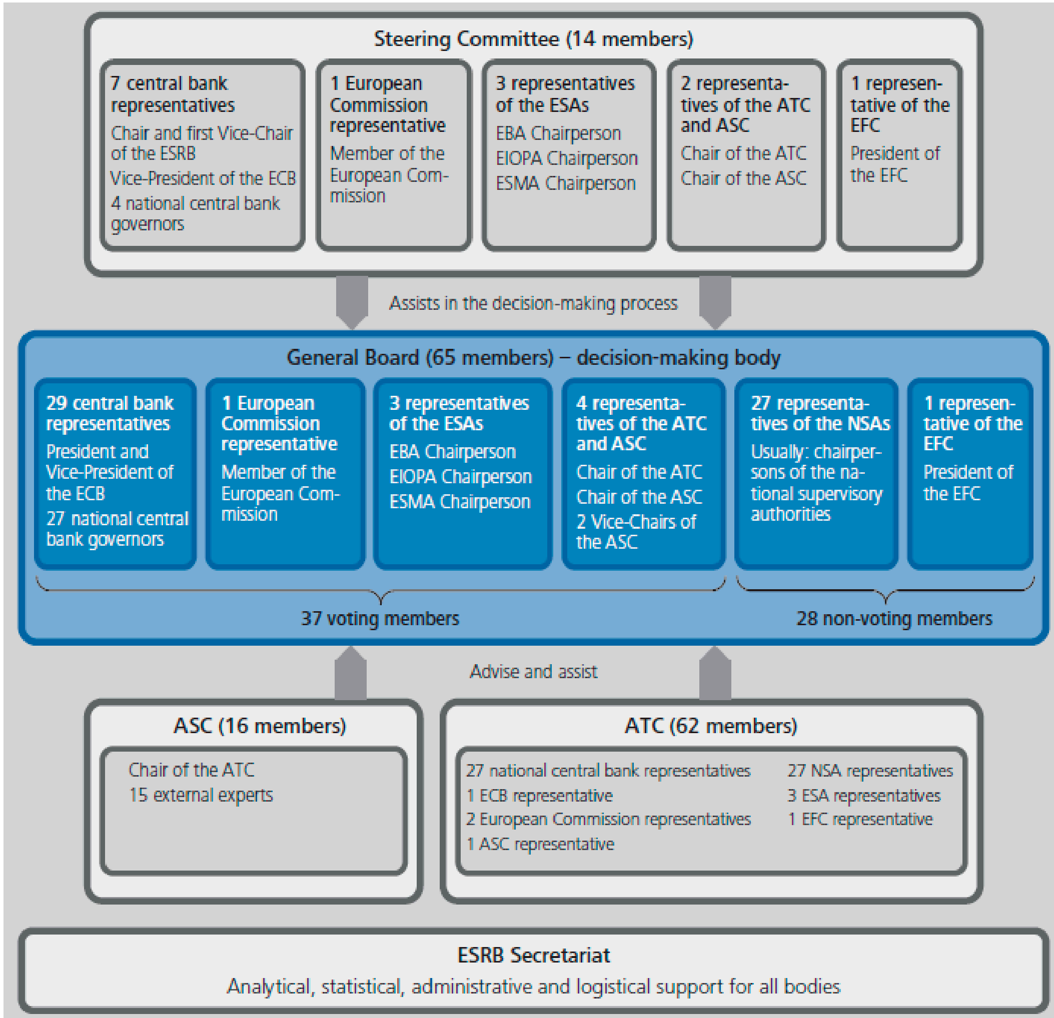
A. The Role of the ESRB: Mandate, Tasks, and Organization

5. **Role of the ESRB.** Under the recommendation of the de Larosiere group, the ESRB is responsible for the macroprudential oversight of the financial systems and institutions within the EU in order to prevent or mitigate systemic risks, to avoid episodes of widespread financial distress, contribute to a smooth functioning of the Internal market and ensure a sustainable contribution of the financial sector to economic growth.[2] Given the highly integrated and interconnected nature of the EU financial system, the ESRB also has a natural role in ensuring effectiveness, convergence and coordination of macroprudential policies to protect the integrity of the single market and protecting financial stability at the national and supra-national levels.

6. **Mandate, tasks, structure and policy instruments of the ESRB.** The ESRB is performing its mandate under a set of institutional constraints set out in EU regulation. The ESRB has a complex organizational structure that results from the need to ensure high level policy representation of 27 member states (Figure 1). The ESRB has no legal personality, is dependent on the ECB who provides administrative, logistical, statistical and analytical support to the ESRB. The powers of the ESRB are non-binding and the impact of policy instruments depends on the effectiveness of an "act or explain" mechanism. The ESRB is accountable to the EU Parliament, as stated in its regulation.

[2] Regulation (EU) No. 1092/2010 of the European Parliament and of the Council of November 24, 2010.

Figure 1. EU: Organizational Structure of the ESRB



Source: Bundesbank Monthly Report April 2012.

B. Approach of the ESRB to Monitoring and Assessing Systemic Risk

7. **Short-term risks**. In addition to the risk dashboard (described below), various inputs are used for systemic risk analysis, including documents such as ECB risk surveillance note, risk analysis report, ECB white book, market intelligence reports by the ECB and the BoE, EU Commission staff reports on systemic risks, ESAs dashboards, JC report on risks and notes by the ESRB Secretariat with bottom-up questionnaires for identifying risks.

8. **Medium-term risks and activities**. Once identified, medium-term and long-term risks results in the setting-up of working groups involving staff from the ECB, EU Commission and ESAs, national authorities and academics. The working groups provide analytical papers to prepare policy recommendations on medium-term risks. In 2011 and 2012, attention has focused on risks arising from bank funding and asset encumbrance,

US dollar denominated bank funding, lending in foreign currencies, loan forbearance, regulatory treatment of sovereign exposures, interconnectedness of credit swap and interbank markets, stress testing, securities financing transactions, money market funds, loan forbearance, high frequency trading and the treatment of long-term guarantees in insurance.

9. **Data exchange with national and EU institutions**. Data exchange between the ESRB and other national and EU competent authorities is guided by the EU regulation, which allows the ESRB to receive aggregate and disaggregated data from the ESAs, the ESCB, the EC and national supervisory authorities, and for them to receive necessary information on relevant risks from the ESRB. Unlike the ESAs, ESRB's access to data on an individual systemic institution is limited and usually requires justification. This may hamper systemic risk analysis that often needs to be based on real time supervisory data.

C. Main Outputs of the ESRB

10. **When significant risks to the EU financial system are identified, the policy instruments available to ESRB to avert or mitigate them are *warnings* or *recommendations* (which could be confidential or made public), issued to the EU, EU member states, the EC, the ESAs or national supervisory authorities.** Whether these warnings and recommendations are implemented is essential for the credibility and the policy relevance of the ESRB.

Risk warnings

The ESRB delivered confidential messages to governments during 2011, in response to the deterioration of market conditions. The ESRB Chair Jean-Claude Trichet made public reference to reasons of concerns addressed in his communication to governments, without revealing their format, frequency and contents. Press releases published after the General Board meetings however regularly hinted to the substance of the ESRB assessment and contained substantial warning elements. The launch of LTROs across late 2011 and early 2012, the announcement of steps to establish a SSM at the ECB in June 2012, and on OMT in September of the same year contributed to reducing tail risks of exit from the euro area and associated redenomination risks. The ESRB did not issue statements referring to risks in relation to the BU, but positions were taken publicly by the ASC in reports (July 2012 report on "forbearance, resolution and deposit insurance" and September 2012 report on the EC proposal for a BU).

Recommendations by the Board of the ESRB

11. **ESRB has issued publically five recommendations:**

- *Recommendations on Foreign-Exchange Lending (issued 09/2011; published 11/2011; deadlines June and December 2012 and December 2013).* The recommendation focused on improving resilience of national financial systems to currency risks, reducing asymmetric information between borrowers and lenders, and taking policy actions to contain foreign currency lending in a countercyclical manger and improve incentives and risk pricing, including through supervisory actions.

- *Recommendation on US dollar funding (issued 12/2011; published 01/2012; deadline June 2012).* Noting that a number of EU credit institutions have significant US dollar funding needs and maturity mismatches, creating strains in the financial system, the ESRB recommended to take steps to mitigate risks of tensions in US$ funding, and improve monitoring and data collection.[3]

- *Recommendations on the macroprudential mandates of national authorities (issued 12/2011; published 01/2012; deadline June 2013).* The ESRB noted that effectiveness of EU macroprudential oversight also necessitates national macroprudential frameworks to be in place to ensure effective follow-up on ESRB warnings and recommendations. The text provided guiding principles for core elements, including requiring clear objectives, tasks and powers to overcome bias toward inaction, and recommending giving a leading role to central banks.[4]

- *Recommendation on funding of credit institutions (issued 12/20/2012; published 02/18/'2013; specific timeline between 12/2013 and 12/2016).* It addresses the issue of asset encumbrance with a comprehensive approach, based on enhancement of institutions' risk management and supervisory monitoring. The ESRB is still deliberating on a proposal on market transparency of asset encumbrance. The recommendation also touches upon funding risks and feasibility, on an aggregated basis, of funding plans in the near future, and on the identification of best practices for covered bonds.

- *Recommendation on money market funds (issued 12/2012; published 02/18/2013; deadline June 2014).* In light of the upcoming EU Commission review of the UCITS framework, the ESRB recommends that MMFs move from the constant to the variable net asset value model. Moreover, explicit liquidity requirements as well as enhanced public disclosure and reporting by MMFs should be introduced. Finally, better information sharing between authorities on MMFs is recommended.

[3] A non-public recommendation on US dollar funding was also issued.

[4] The Selected Issues Paper to the 2011 euro area Article IV consultation developed a similar argumentation on the importance of having effective macroprudential frameworks in place at the national level ("The European Systemic Risk Board: Effectiveness of Macroprudential Oversight in Europe," E. Nier and T. Tressel, July 2011).

Other activities of the ESRB

ESRB Risk Dashboard (first publication 09/2012)

- As requested by EU Regulation establishing the ESRB, a risk dashboard has been produced and a set of quantitative and qualitative indicators published on the ESRB website. The set of indicators is one of the inputs for the Board's discussion on risks and vulnerabilities. The dashboard will be updated and revised on a quarterly basis.

ASC reports and other publications and advices on regulatory reforms

- Various reports have been published on the ESRB website including notably reports of the ASC on the EC proposal for a BU (09/2012), on forbearance, resolution, and deposit insurance (07/2012). Other publications include an occasional paper on money market funds in Europe and financial stability (06/2012); commentaries on the ESRB institutional set-up (02/2012), on macroprudential mandate of national authorities (03/2012), on systemic risk due to "retailization" (07/2012), and on lending in foreign currencies (12/2012); a letter of the Chair to EU legislators on macroprudential tools in the CRR/CRDIV (04/02/2012); and two advices to ESMA in the context of EMIR on eligible collateral for CCPs and the use of OTC derivatives by non-financial corporations.[5]

D. Were the Various Instruments of the ESRB Effective and the Framework Credible?

12. **Criteria**. Assessing the effectiveness of the ESRB framework and instruments is a complex task, as there are no established international best practices to assess macroprudential authorities. Moreover, it is important to keep in mind that the supra-national dimension of the ESRB is, by nature, a political constraint that national macroprudential bodies would not have to deal with. Against this background, several dimensions can provide useful indicators of the effectiveness of the ESRB instrument and framework:

- Prioritization and quality of risk warnings and recommendations.
- Policy relevance, including through the publication of risk warnings.
- Publication and implementation of recommendations by addressees.
- Capacity to communicate its analysis of systemic risks.

[5] Policy advices on the CRDIV/CRR were provided in three stages, two non-public letters to EU institutions in 2011 and a public letter in March 2012. Policy advices to ESMA on EMIR were published 08/2012.

13. **Risk warnings and recommendations of the ESRB were relevant and adequately prioritized.** Risk warnings of the ESRB appeared to be timely as they were issued when the crisis became systemic for the EU financial system. They correctly identified the emerging systemic risks and called for policy implementation, readiness to take action and the need for coordinated supervisory actions including recourse to backstop facilities. Policy recommendations also correctly identified medium-term risks to the EU financial system and called for adequate policies to mitigate these risks. In retrospect, the recommendation on US dollar funding of EU financial institutions also appeared to pinpoint a key vulnerability that contributed to the seizure of wholesale funding markets at the end of 2011.

14. **The ESRB managed to partly communicate its warnings publicly, although it is not clear how influential or timely they were.** The press release of the September 21, 2011 Board meeting of the ESRB had explicit references to this warning, e.g., the systemic nature of the crisis, the need for coordinated supervisory action and suggested recourse to "the possibility for the European Financial Stability Facility to lend to governments in order to recapitalize banks, including in non-program countries." It is however difficult to assess the extent to which these public statements (let alone the private warnings) were influential. At the time the EBA recapitalization exercise was being debated, and concerns of disorderly deleveraging were being raised, the ESRB took a public position, but only at a late stage through the introductory statement of Sir Mervyn King at the press conference of the General Board meeting of December 22, 2011. At that time, the parameters of the recapitalization exercise had been decided and it was already clear that there would not be any common guarantee schemes and backstops established at the EU level, and the deleveraging of EU banks was already proceeding in an uncoordinated fashion.

15. **Implementation of ESRB recommendations has been satisfying so far.** All five recommendations were published within two months of their issuance, demonstrating broad consensus among member states on the importance and relevance of these policy recommendations. So far, implementations of all five recommendations have been satisfying:

- On foreign exchange lending, all EU member states, Norway and Iceland have responded on the self-assessment part, but some member states with fixed exchange rate regimes pointed out that measures should be applied only with respect to lending in foreign currencies other than their reserve currency.

- On US dollar funding, implementation has also been very good, while further may be needed in some specific areas.[6] The recommendation has also helped raise important issues requiring further consideration. Implementation of the non-public part has been linked to adoption of the CRDIV/CRR legislative proposals.

[6] Some member states referred to a proportionality rule as a reason not to implement the recommendation.

- On national macroprudential mandates, there was extremely high responsiveness (all EU countries, plus Norway), highlighting the positive reception of the ESRB recommendations. The high level of compliance in the first follow-up phase indicates a positive signal regarding the role of the ESRB in coordinating future uses of macroprudential tools at the EU level.

16. **The ESRB should further develop its capacity to communicate its systemic risk analysis.** Publication of a risk dashboard is an initial step in setting up a regular analytical tool to analyze systemic risks. This tool is completed by surveillance notes produced by the ECB. However, as noted in the regulation of the ESRB, the publication of the risk dashboard should be associated with the publication of an analysis of systemic risks. This would help enhance the capacity of the ESRB to communicate its systemic risk analysis and warnings.

17. **The effectiveness of the ESRB framework may need to be strengthened.** Future effectiveness of the ESRB hinges on its 'will to act' and enforceability of its recommendations and policy impact of its warnings. Its capacity to act will depend on a decision-making process that will need to be flexible enough to facilitate timely decisions on the communication of emerging risks and policy recommendations. To promote 'bottom-up' approach to risk identification, the ESRB staff could propose the work program and systemic risk analysis to the Steering Committee, while the ATC could play a more technical role. The ESRB was designed to operate without legally-binding powers; the key is to assess whether this constraint could impede its effectiveness going forward. With respect to recommendation, the 'act or explain' mechanism seems to have operated relatively well so far, but follow-up on risk warning has been less evident. Another area that may require attention is the frequency of the meetings of the General Board. As experienced in 2011, a quarterly frequency may not be adequate to ensure timely communication of risk warnings in the midst of a financial crisis. It could be useful to consider a simplified more focused decision making structure in situation of emergency.

E. Should the ESRB Play a Role in Crisis Management?

18. **Although it was established during a systemic crisis, the ESRB has produced outputs broadly balanced between medium-term and short-term risks.** While recommendations were more focused on medium-term risks, two timely risk warnings were issued and various publications and communications were highly relevant in the context of the ongoing financial crisis. The ESRB board did not take explicit positions or issue risk warnings in relation to the proposal for a BU, partly limited by its mandate.[7] While the ESRB is supportive of the BU, as clarified for instance in the ASC report on the EC proposal, discussions seem to have demonstrated a diversity of opinions among member institutions.

[7] The ESRB's role in influencing legislation is limited once the negotiation between the legislation bodies and the EU has started.

This example demonstrates that the constraints of the ESRB framework may become binding when on policy issues that are highly political and for which there is diversity of view among Board members.

19. **While the ESRB has a clear mandate to issue risk warnings during systemic crises, it is excluded from playing a role in crisis management.** While the ESRB should play a role in the use of macroprudential tools across EU countries (more on this below), the application of macroprudential tools is likely to remain asymmetric and tools for systemic crisis (including exceptional liquidity provision) will remain in the hand of central banks and other institutions. However, the ESRB should bring a macroprudential perspective for stress tests, in collaboration with the ECB and the EBA, including when they are used for crisis management purposes.

III. MACROPRUDENTIAL TOOL-BOX FOR EU COUNTRIES

20. **The macroprudential toolkit should include a carefully selected set of instruments that would be sufficient to address the most foreseeable sources of systemic risks.** Macroprudential risks are multidimensional and arise through various institutions, markets, and sectors. One instrument may address more than one dimension of systemic risk, but there are uncertainties about effectiveness of instruments. An effective toolkit should be able to mitigate channels of amplification of systemic risks. It should have build-in flexibility to address the changing nature of systemic risks. Some instruments would have a broad range of action while others may be more focused on specific markets or sectors. Some instruments may be more effective at constraining the build-up of systemic risks or at mitigating the impact of shocks, while others may be more efficient and create fewer distortions. It is also important to select instruments that give the ability to determine the appropriate timing for the activation or deactivation. Some instruments may have a broad scope, affecting both the time dimension and cross-sectional dimension of systemic risk, while other instruments (perhaps of a more structural nature) would be more adequate at addressing the cross-sectional dimension or the time dimension of systemic risk. Given the size, interconnectedness and complexity of European G-SIBs, there is merit in ensuring a specific focus on structural elements of the toolkit. Lastly, instruments should taken due consideration of the diversity of countries and circumstances within the EU. For example, the experience of emerging European countries may have been more similar to that of other emerging markets than to the experience of more advanced EU countries (Box 1).

21. **The Basel III countercyclical capital buffer (the only macroprudential instrument adopted by the BCBS) is a necessary but not sufficient element of the toolbox; it should be complemented by more targeted instruments to address the cross-sectional and time dimension of systemic risks (Box 2).**

- *While broad in scope, the CCB has limitations.* There will be long lags (up to one year) between the announcement of capital add-ons by supervisors and implementation by banks, although under the draft CRD a short lag may be possible under extraordinary circumstances. During downturns, the decision to release the buffer by the *macroprudential* supervisor may be inconsistent with the *microprudential principle* under which banks should not deplete capital when nonperforming assets are building up. The CCB may be a blunt tool: when the build-up of imbalances is concentrated in particular sectors, this could lead to a crisis well before the buffer is triggered by aggregate developments.[8]

- *Limits on LTV/DTI are examples of the possible instruments that could usefully complement the CCB. C*ontingent upper bounds on loan-to-value ratios, potentially completed by an upper limit on the debt-to-income ratio to ensure ability to repay, would be useful instruments to complement the CCB, while being adapted to specific real estate developments. While implementation could be challenging, as there are risks of regulatory arbitrage and political economy considerations to overcome, evidence from emerging markets suggests it may be an effective instrument to mitigate house price appreciation, at least temporarily. Empirical evidence from euro area countries lending standards tends to confirm the view that LTV limits may be an effective instrument to mitigate credit booms and house price appreciation. Its benefits may differ across countries, according to characteristics of the mortgage market (including, for example, whether mortgages are full recourse or not). Relaxing the LTV limit in a downturn may also create conflicts between the macroprudential and the microprudential perspectives.[9]

22. **A set of principles should be adopted to ensure the 'will-to-act' and trigger the use of macroprudential instruments during upswings.** The ability to identify and measure systemic risks and vulnerabilities is a key factor for successful implementation of macroprudential tools, and there must be clear criteria for activation.[10] Decision to trigger activation is likely to be complex as there is no easy measurement of systemic risk being by nature multi-dimensional. Assessing success is also difficult, as the counterfactual may not be known. Costs of a mistimed activation could be asymmetric as delayed action may be more costly than intervention taking place too early. Delayed activation may imply that instruments are less effective as there may not be enough time for them to have an impact, but too early activation may incur un-necessary side effects. Having rules in place would be

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[8] The impact on credit supply will depend on the speed at which the buffer is built-up. A fast build-up will presumably be more effective in constraining credit supply, in particular if banks have to resort to costly issuance of equity.

[9] See also evidence reported in Lim, C.H. et al. (2011), "Macroprudential Policy: What Instruments and How to Use Them?" IMF Working Paper No. 11/238.

[10] "Operationalising the selection and application of macroprudential instruments," CGFS Publications No.48., December 2012.

important to reduce uncertainty and anchor expectations, but, given the limited experience with macroprudential policies, a large element of discretion and judgment is likely to be necessary to decide the timing and extent of tightening.[11]

23. **Finding a set of early warning indicators to trigger the use and release of instruments is key to the successful implementation of macroprudential policies.** The indictors could include: (i) the credit to GDP ratio or its deviation from a trend level (the Gap measures), at aggregated or sectoral level; (ii) indicators for market volatility (CDS spread) or other price-based measures of default or distress; (iii) indicators measuring bank vulnerability and potential funding stress, such as non-core bank liabilities. Sectoral measures (such as measures of household or corporate indebtedness) would more easily identify the build-up of sectoral vulnerabilities that may not be well captured by the private credit to GDP ratio. The rule-based triggers should be transparent, thus avoid surprises to markets. They would help constrain the incentives for risk taking, and prevent forbearance. The triggers based on market prices need to be carefully designed to minimize the risk of triggering a downward spiral, which could undermine financial stability.[12]

24. **The set of EU principles for macroprudential policies should provide guidance on the interaction with monetary policy.** While conventional monetary policy instruments are not well-suited to mitigate systemic risks, maintaining price stability may not always coincide with the financial stability objective. The experience of the recent crisis has demonstrated that relaxed monetary policy can however contribute in fueling the upturn of the credit and asset price cycle, including by affecting risk taking behaviors. It also plays a role in financial downturns by supplying liquidity to financial intermediaries and markets. In the context of the EU, several key considerations should be taken into account to ensure that instruments of monetary policy and macroprudential instruments enhance rather than reduce the effectiveness of each policy.[13]

- *Interactions between monetary and macroprudential policies.* The two policies share several transmission channels, including the bank lending channels, and therefore will interact with each other even if they have, in theory, different objectives which may potentially conflict with each other. Monetary policy may have to respond to the build-up of systemic risks, especially when macroprudential instruments are constrained. In a downturn, monetary policy decisions (including unconventional ones) may have to internalize financial stability considerations. Uncertainty about the

[11] Borio, C., 2009, "Implementing the macroprudential approach to financial regulation and supervision," Banque de France, Financial Stability Review 13, the Future of Financial Regulation, September.

[12] See also IMF (2011), "Toward Operationalizing Macroprudential Policies: When to Act?" Chapter 3, Global Financial Stability Report, September 2011.

[13] General considerations are discussed in IMF (2013), "The Interaction of Monetary and Macroprudential Policies," IMF Board Paper.

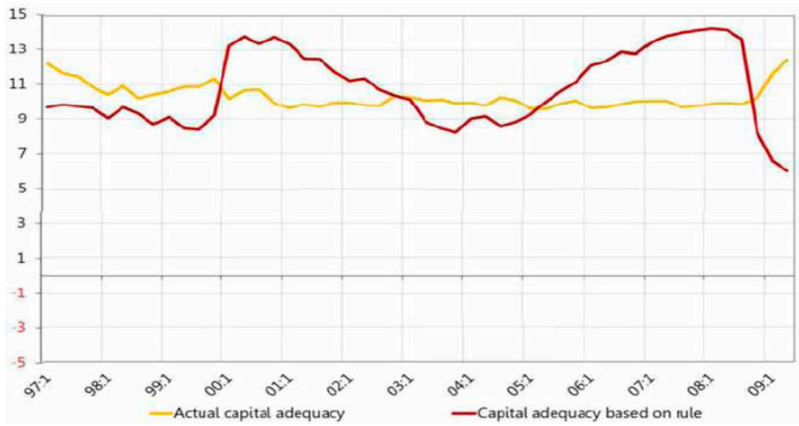
effectiveness and side effects of specific macroprudential instruments adds a motivation to consider possible complementarities and synergies between these instruments and instruments of monetary policy.

- *Principles guiding the use of macroprudential instruments in a monetary union.* Where monetary policy is constrained such as in the euro area, macroprudential instruments become relatively more important policy instruments in particular when financial cycles are not synchronized across countries and where price stability is more likely to conflict with financial stability. While they should not substitute for macro-economic policies, they should be well placed, in absence of alternative policy instruments, to play a prominent role in helping mitigate the build-up of systemic risks when monetary policy cannot be relied upon to 'lean against the wind' and when fiscal policies are constrained and cannot be relied upon to react in real time on asset price developments. In the context of the euro area, macroprudential instruments could play an even more important role given the lack of a fiscal union that would provide the possibility of transfers that would help cushion the impact of a crisis and smooth the necessary rebalancing at the national level.

25. **The macroprudential toolbox should also be complemented by guidance on macroprudential actions that would be needed to mitigate adverse effects during an economic downturn.** Many instruments are conceptually more suited for the upturn than for the downturn. In a downturn, there is a fundamental tension between microprudential and macroprudential objectives and market pressures may prevent policy makers to be able to release capital buffers or relax limits on other macroprudential tools (see Figure 1).[14] While liquidity provision by the central bank and unconventional measures may be essential tools to stabilize markets during systemic crises, there may also be merit in considering the potential role of structural or cyclical macroprudential instruments in correcting fire sale externalities and dampening other contagion effects.

[14] During a crisis, market pressures may become the binding constraint. See for example, the discussion at the BoE FPC at the time of the wholesale funding market pressures in September of 2011: http://www.bankofengland.co.uk/financialstability/Pages/fpc/meetings/default.aspx

Figure 2. EU: Capital Adequacy through the Cycle in Sweden



Source: BIS Paper N.60 "Challenges for the design and conduct of macroprudential policies," Stefan Ingves (2011).

A. Proposal for the Minimum Set of Macroprudential Instruments

26. Such a minimum set of instruments, in addition to the CCB and limits on LTV/DTI that all EU countries should have in place could be enriched by an additional set of indicative instruments that would play a more complementary role. Among others, such instruments could include:

- *Time varying exposures to specific sectors.* Time and sectoral contingent risk weights would usefully complement the countercyclical capital buffer for two reasons. First, they would target more specifically the sectors where systemic risk is developing, thus allowing a cross-sectional differentiation of risks. Second, because of their targeted nature, they could be more effective in taming financial imbalances without adversely affecting the supply of credit to other segments of the economy. Examples of such measures would include contingent risk weights on interbank lending, lending to sovereigns, corporates or households.[15]

- *Funding of financial intermediaries.* Balance sheet expansions during the boom were financed by relying on wholesale funding, often of a short-term nature. A possible instrument complementing the two quantitative liquidity constraints of Basel III would aim at limiting the use of non-core funding instruments and could help address both the time dimension and the cross-sectional dimension of systemic risk.

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[15] Optimal risk weights may differ from a microprudential perspective than from a macroprudential one. For example, collateralized short-term assets (such as reverse repo transactions) may appear safe from a microprudential perspective, and therefore attract low capital requirements. But they could be systemically important as decisions not to roll-over the transaction may trigger fire sales of assets by the counterparty of the transaction, which may amplify financial crisis (Morris and Shin, 2008).

- *Collateralized lending markets.* A possible instrument *would be contingent margins or valuation haircuts* on existing securities used as collateral in the securitized lending markets (such as for repos). This instrument would be used to regulate the supply of secured funding which would help reduce the risks of fire sales. It would also affect the contribution of the shadow banking system to pro-cyclicality by affecting their funding conditions in wholesale markets. Ideally, strong margining should be extended to OTC markets to incentivize the move to central clearing of derivatives.

IV. Effective Macroprudential Oversight for the EU

27. **Because EU financial systems are integrated, a supranational approach to macroprudential oversight is necessary.** Decisions to act on macroprudential risks must have an EU dimension to overcome cross-country externalities, leakages and ring fencing tendencies and minimize the risks of regulatory capture at the national levels. Strong coordination of policy actions at the EU level is needed to avoid regulatory arbitrage by financial institutions that are located outside of the country setting macroprudential policies. The establishment of the SSM, whereby the ECB is given macroprudential powers will require designing modalities for the coordination between the ECB and the ESRB.

A. Role of the ESRB

28. **The ESRB has role to play in ensuring effective macroprudential oversight for the EU financial system as a whole, with close cooperation with the ECB.** The ESRB should continue to play a key role in providing guidance on macroprudential policy framework (including mandate, institutional arrangement, and instruments) to ensure that macroprudential policy is operational in all member states. Notwithstanding resource constraints, the ESRB may also play a role in the *calibration* of individual macroprudential instruments across all EU countries, while collaborating closely with the ECB for SSM countries. The calibration should ensure the identified risk is adequately addressed, and allow for flexibility at the national level while ensuring convergence of practices across countries. In particular, the instrument should be calibrated in a way that mitigates risks effectively—without imposing undue costs on the financial sector—and that all national macroprudential authorities adopt similar quantitative responses to systemic risks.

29. **The ESRB should play a forceful role in cross-border coordination, particularly in ensuring reciprocity across EU countries, and in harmonization of national macroprudential frameworks.** National authorities may not have power over all lending within their territory, including by foreign bank branches. To avoid regulatory arbitrage, negative spillover effects and ensure effectiveness of macroprudential action across the highly interconnected EU financial systems, a mechanism is needed whereby home country authorities reciprocate the macroprudential measures put in place by host countries, based on the exposures of the consolidated national financial institutions to the asset class of the host

country considered.[16] Ensuring policy effectiveness is particularly relevant for EEEs with a high degree of cross-border banking activities and direct cross-border lending. For that purpose, the use of macroprudential instruments over a particular activity could be referred by national authorities to the ESRB for approval so that all EU banks regardless of origin are covered. While reciprocity is not required or by the legislation, the ESRB should, if it is satisfied that the macroprudential action taken by the host authority is justified, issue a recommendation to other macroprudential authorities to reciprocate the measures taken by the host authority, when home and host countries are not part of the SSM (see below). The ESRB has already announced its intention to establish coordination procedures when considered appropriate.

30. **The ESRB could validate the decisions of member states to set or modify macroprudential instruments when these decisions interrelate with EU standards.** For example, under the forthcoming capital requirements directive (CRD IV/CRR), member states will have flexibility in the variation of risk-weights and sectoral buffers at the national for macroprudential purposes. A potential solution to prevent arbitrage, leakages and negative externalities may be for such use of risk-weights to be based on asset classes that could apply to all financial institutions irrespective of their location.

B. Interaction with other EU Bodies and the SSM

31. **The ESRB will need to continue work closely with the ESAs.** Continued interaction between the ESRB and the ESAs will be important to ensure a proper meshing of macroprudential and microprudential instruments and risk assessments. Strong cooperation is needed also in the exchange of data and information. As noted in the EFFE report, the current regulations stipulate that requests for detailed data from the ESAs will have to be ad hoc and motivated, and the ESRB (or the EBA) has no direct access to data. This constraint may continue to hamper the effectiveness of the ESRB.

32. **The ESRB depends on the ECB for analytical, statistical, logistical and administrative support.** Close collaboration between the two institutions may remain important in the future. Since the ESRB is an EU institution covering non-euro area countries and non-banks, there may be a need in the future to also strengthen its analytical resources, independently of the analytical contribution of the ECB. The creation of the SSM may require even more that the ESRB develops its own resources and acquire some independent analytical capacity.

33. **The ESRB will need to continue work closely with the EU Commission.** In particular, the ESRB needs to warn when legislative action on the part of the Commission

[16] For example, an asset class would be defined as sovereign bonds of country A or mortgages on properties of country B.

unduly constrains macroprudential policy action. And it should recommend that the Commission takes positive legislative action to ensure that common macroprudential toolkits will be available to policymakers across the EU, potentially beyond the instruments included in the CRDIV/CRR.

34. **The creation of a BU covering at least euro area countries will likely have a profound impact on the ESRB:**

- *The ECB will appropriately have macroprudential powers for banks under the SSM.* The Draft Council Regulation (2012/0242) concerning the establishment of the SSM, assigns macroprudential powers to the ECB, over banks under the SSM, but it should also cover financial holding companies and mixed financial holding companies. However, the ECB will not have macroprudential powers over other financial institutions. The macroprudential powers of the ECB will facilitate early identification and action on systemic risks, and enhance information sharing, home-host coordination, and internalization of cross-border externalities within the SSM. The ECB is appropriately given binding powers to be able to use macroprudential instruments that are in the CRDIV/CRR if it deems necessary, but its toolkit should include macroprudential instruments that are not included in the CRD IV (such as limits on debt-to-income and loan-to-value ratios) when a common macroprudential framework for the SSM countries is in place. The established independence and financial stability expertise of the ECB would help build a strong institutional framework among SSM countries and provide capacity to implement macroprudential instruments against national political pressure while taking into account interactions with monetary policy. However, the ECB could be subject to political pressures and disagreements with national authorities, which would add rigidities to the system, but the ECB should be able to have a final say and be able to act if needed.

- *Interaction between national authorities and the ECB within the SSM.* National authorities will be allowed to retain macroprudential powers under the SSM—providing flexibility to tailor solutions to local conditions—but in close cooperation with the ECB. Either party that takes such a step needs to inform and consult with the other party ahead of time, under modalities described in the EU Council draft regulation of the SSM. In practice, cooperation will be critical to ensure flexibly to macro-financial developments in particular countries or asset markets, and coherence and effectiveness of measures, and mechanisms would need to be in place to ensure effective decision making and 'will to act'. However, accountability lines between the ECB and national authorities will need to be clarified to prevent 'accountability gaps' to arise. Mechanisms to resolve conflicts of interest that may arise between national authorities and the ECB and overcome inaction bias must also be designed. Governance mechanisms must also protect the independence of the ECB.

- *The role of the ESRB will be complemented and enhanced by the SSM.* The modalities for coordination between the ECB and the ESRB in the area of macroprudential policies will need to be clearly spelled out. While there will be some overlap between the tasks of the ESRB and of the ECB in the area of banking and covering euro area countries, this overlap should be seen as reinforcing the macroprudential oversight of the EU financial system. The ESRB will continue coordinate macroprudential oversight between countries participating in the SSM and those remaining outside. Furthermore, the ESRB could continue to be tasked with the development of the macroprudential toolkit as outlined in the previous section. Ensuring macroprudential oversight at the EU level will also remain important for non-banks and markets, which will not be covered by the SSM. The ECB should coordinate closely with the ESRB, and implement warnings and recommendation issued by the ESRB, in close cooperation with national authorities.

V. Recommendation and Conclusions

35. **Macroprudential policy toolkit should be applicable not only for the upturns but also for the downturns of economic cycles.** During the upturns, instruments need to prevent the build-up of aggregate or correlated risks over time, such as aggregate or sectoral credit imbalances; during the downturns, instruments need to mitigate the amplification and contagion effects arising from interconnectedness and procyclicality of financial markets, most importantly to prevent fire sales of bank asset.

36. **Within the BU, the ECB should have macroprudential powers, because strong monetary policy and macroprudential policy framework can be mutually reinforcing and the ECB is well placed to have an integrated approach to systemic risk identification.** One key challenge for macroprudential supervision is to design and calibrate macroprudential instruments and implement them against political interference. The established independence of the ECB would help build up a strong institutional framework for macroprudential policy, but accountability and governance mechanisms must be in place to limit conflicts of interests and protect its monetary policy objective. For this reason, the ECB should be responsible for a wider range of macroprudential instruments, going beyond those included in the CRR/CRD IV, as envisaged under the EC proposal for SSM.

37. **The ESRB should remain responsible for the macroprudential oversight at the EU level and must have a clear mandate and legal powers to be effective.** Cross-border externalities and EU-wide financial stability concerns provide rational for a supranational macroprudential supervisor at the EU level, because these concerns cannot be effectively addressed without a coordination mechanism. The ESRB is also the EU body responsible for the macroprudential oversight of non-banks. The establishment of the ESRB in January 2011 was a crucial step in providing greater traction for macroprudential oversight at the EU level. However, as for all EU institutions, its mandate and legal powers are limited and it has been subject to a set of institutional constraints—a complex decision making process at the Board

(with 27 member states and EU/euro area institutions being involved), no direct access to supervisory data, and no binding powers. Going forward, considerations may be given to granting the ESRB binding powers and providing more resources independent from the ECB.

38. **The coordinating role of ESRB should be further enhanced, through closer cooperation with the ESAs and the ECB as the single supervisor for the BU.** Continued interaction between the ESRB and the ESAs will be important to ensure a proper meshing of macroprudential and microprudential instruments and risk assessments. The ESRB should interact with the ECB on macroprudential toolkits when the ECB takes on macroprudential responsibilities. In particular, the ECB implement warnings and recommendation issued by the ESRB, or impose on national authorities to 'act or explain' when the ESRB issues a warning directed to them. The ECB should continue provide support to the ESRB.

39. **The use of macroprudential instruments at national level would need to be consistent with the overall objective of the internal market (more specifically, the free movement of services and capital) while protecting financial stability.** This approach suggests that while the set of instruments available should be comprehensive enough to address multifaceted macroprudential concerns at national level, efficient coordination would be needed to limit possible negative externalities or unintended effects for financial stability and the sustainability of the single market.

Box 1. Lessons from Macroprudential Policies in Emerging Europe

During the past decade, many countries in Central and Eastern Europe relied on a rich set of macroprudential instruments in response to capital inflows and credit booms.[1] In these countries, credit and housing booms across the region were commonly fueled by foreign-exchange denominated or indexed loans. Instruments included reserve or liquidity requirements, capital requirements, loan classification and provisioning rules, as well as specific measures to limit foreign currency lending or restrict credit eligibility. When policymakers took action, they did it through different instruments, at different time, and with different intensities. Many of the governments joining the EU in 2004 preferred to strengthen supervisory and monitoring measures and limited their use of administrative and prudential measures. In some cases, policies were tightened at a late stage, while in others policies were relaxed during the expansion. There are cases in which prudential requirements were set very high; for example reserve requirements on short-term deposits and foreign reached at their peak, 30 percent in Romania and 45 percent in Serbia.

Studies typically found some modest impacts of macroprudential measures on overall credit growth and temporary effects on capital flows.[2] A reason for the limited effectiveness in limiting credit booms is that some of the prudential measures were circumvented through cross-border lending or lending by non-banks. In a number of cases, subsidiaries in emerging Europe simply booked some loans with the parent institution or a non-bank subsidiary (leasing company) instead of the local banking affiliate to avoid restrictions on lending by host country authorities. Some studies found that domestic credit growth was significantly affected by macroprudential measures; others also find a dampening effect on house price appreciation. Measures taken during the upturn however helped build buffers that turned valuable during the downturn.

[1] Ötker-Robe, Inci, Zbigniew Polanski, Barry Topf, and David Vávra, 2007, "Coping with Capital Inflows: Experiences of Selected European Countries," IMF Working Paper 07/190 (Washington: International Monetary Fund).

[2] Kraft, E., and T. Galac (2011), "Macroprudential Regulation of Credit Booms and Busts —The Case of Croatia," World Bank Policy Research Working Paper No. 5772. Vandenbussche J., Vogel U., and E. Detragiache , "Macroprudential Policies and Housing Prices – A New Database and Empirical Evidence for Central, Eastern, and Southeastern Europe ", IMF Working Paper. Bakker, B. and C. Klingen (2012), *How Emerging Europe Came Through the 2008/09 Crisis: An Account by the Staff of the IMF's European Department*, IMF Publications, Washington D.C.

Box 2. Effectiveness of Macroprudential Instruments in Advanced EU Countries and Lessons from Euro Area Bank Lending Standards

Impact of a 2.5 percent increase in capital requirement on credit (in percent)
phased in over two years

horizon:	4.5 years	8 years
Median	-3.5	-4.8
Minimum	-1.8	-2
Maximum	-9	-9

Source: MAG interim report August 2010; based on "satellite model"

Most advanced economies have no or little experience with macroprudential policies, and as a result there is little empirical evidence of macroprudential instruments' effectiveness in mitigating systemic risk in these economies. Model simulations of the impact of Basel III instruments, such as the countercyclical capital buffer, imply however that the impact on credit growth or house prices would most likely be modest. For example, according to results reported in the MAG interim report of August 2010, the long-term impact on credit of a 2.5 percent increase in capital requirements phased in over two years is estimated to be between 2 and 9 percent. While non negligible, these effects remain very modest in comparison to the amplitude of recent housing booms in the euro area.[1]

in percent (cumulative 2000-07)	Spain	Ireland 1/
House price appreciation	140	104
HH mortgage credit growth	158	145

1/ ends 2006

While macroprudential instruments have been rarely used in EMU, banks in the euro area typically rely upon non price measures to contain credit supply or screen borrowers. The ECB Bank Lending Survey provides very useful information on price and non-price measures relied-upon to tighten credit supply, and the contribution of various factors affecting the supply of credit. Among the former, the BLS reports the net proportion of banks that reported a net tightening of loan-to-value ratio (LTV). Among the latter, the survey also provides the net proportion of banks reporting that the cost of capital contributed in the tightening (or loosening of lending standards). Such indicators provide, indirectly, very useful information that would help gauge the potential impact that macroprudential measures could have on credit growth and house price appreciation in the euro area.

Panel data econometric analysis suggests that limits on LTVs would have an economically significant impact on credit growth and house prices in EMU countries.[2] A panel data analysis is performed to assess the impact of net changes in LTVs on credit growth and house price appreciation. An instrument variable approach is designed and appropriate control variables are included to correct for the endogeneity of lending standards. The analysis suggests that the impact of net changes in LTVs on credit growth or house prices would be very large, and significantly larger than the impact of price margins. As an illustration, the text figure reports the estimated net tightening of lending standards to reduce mortgage credit growth or house price appreciation by 10 percentage points. The econometric analysis implies that the required net tightening of LTV would be 8 percent and 25 percent respectively. As a benchmark, the net tightening of lending standards in the euro area in the year following the collapse of Lehman Brothers was a net 117 percent.

[1] Spain relied on dynamic provisioning as a measure to build capital buffers, but the measures were weakened after 2004.

[2] "Macroprudential Policies in the euro area: Evidence from Lending Standards," T. Tressel and S. Zhang, draft IMF WP.

Box 2. Effectiveness of Macroprudential Instruments in Advanced EU Countries and Lessons from Euro Area Bank Lending Standards (continued)

While quantitative conclusions from survey responses should be taken cautiously, the comparison with the post-Lehman period does suggest that changes in limits on LTVs may have relatively strong effects on mortgage credit and house prices.