Fabio Panetta: Macroprudential tools – where do we stand?

Remarks by Mr Fabio Panetta, Deputy Director General of the Bank of Italy, during the presentation of the 2013 Financial Stability Review, Central Bank of Luxembourg, Luxembourg, 14 May 2013.

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1. Introduction

I would like to thank the Banque Centrale du Luxembourg (BCL) for inviting me to this conference. It is a pleasure to be here, and to discuss the challenges associated with the implementation of macroprudential (MAP) policy. It is a very topical subject. The unusually expansionary stance of monetary policy in the major regions is putting pressure on asset prices and, in a context of weak economic activity and low inflation, may soon require appropriate macroprudential measures. It is essential, therefore, to deepen our understanding of MAP policy implementation and the optimal choice of MAP tools.

The debate on MAP policy that is taking place in academic and policy circles has produced consensus on a few issues. First, macroprudential policy should aim to contain systemic risk. However, this is by no means a univocal statement of objectives, as systemic risk has multiple facets, and defies clear measurement. Even the usual distinction between the *cross-sectional* dimension and the *time-series* dimension of systemic risk,[1] although conceptually important, does not provide an operational definition of the objective of MAP policy. Second, MAP policies have important interactions with other policies, such as monetary and fiscal policy, and microprudential policy. Yet, these interactions are largely unexplored. Third, selected MAP instruments seem to have some effectiveness. However, the experience gathered thus far on the use of these instruments is still limited, and refers largely to developing economies.

This brief discussion suggests that in spite of the progress made, our understanding of MAP tools and their impact on the financial system and the real economy remains very incomplete. Several important questions await an answer. For example, when imbalances emerge, should we prefer broad-based or narrow instruments? How to monitor and minimize elusion? What definition of the various instruments (e.g. the LTV) should be used? Do MAP authorities have the statistical information or the legal basis to implement MAP policies? The European Systemic Risk Board (ESRB) recently found that, as of September 2012, only two countries were fully compliant with its recommendation on the macroprudential mandate of national authorities, suggesting that the answers to the previous questions are at best unclear. Moreover, a survey on euro-area countries recently conducted by the Bank of Italy indicates a surprisingly poor state of affairs concerning statistics on residential LTVs: information is often of poor quality or even missing altogether. Definitions are barely harmonized across countries.

Clearly, substantial progress is still necessary in this field. Given our limited experience, we must rely on a learning-by-doing approach: start experimenting with MAP tools and observe the consequences, focusing on (not-so-glamorous) technical details.

My comments today are devoted to operational issues. I will focus on three aspects in particular. First, I shall briefly look at recent experience with MAP tools (Section 2). I will

[1] The cross-sectional dimension of systemic risk refers to the interconnectedness and common exposures in the financial system, while the time-series dimension refers to the pro-cyclicality of the financial system. See, for example, Bank of England (2009), "The Role of Macroprudential Policy", *Discussion Paper*, November; C. Borio (2010), *Implementing a macroprudential framework: Blending boldness and realism*, BIS; J. Caruana (2010), *Systemic risk: how to deal with it?*, BIS, February.

then review some conceptual issues on the implementation of MAP tools (Section 3). In Section 4 I will focus on operational challenges in the euro area. Conclusions are drawn in Section 5.

2. Previous experience with macroprudential tools

Most of the previous experience in practical implementation of MAP policies relates to emerging/non-G10 economies, such as South Korea, Brazil, Turkey, and several others.[2] By contrast, experience in developed economies is very limited. Exceptions are Spain, where dynamic provisioning has been applied since 2000; Switzerland, which recently introduced countercyclical capital requirements; New Zealand, which has autonomously applied a structural liquidity measure similar to the Basel III Net Stable Funding Ratio; and the UK, where a fully-fledged operational framework for MAP policy has been set up and the authorities are ready to start experimenting with countercyclical and sector-specific capital requirements. Many other countries are likely to enter this uncharted territory, partly in connection with the implementation of Basel III.

The non-advanced economies' lead in applying MAP policies is probably due to two main reasons. First, these economies started pioneering MAP tools following the systemic crises and severe financial instability episodes experienced since the 1990s. By contrast, most developed countries started considering MAP tools only after the Global Financial Crisis and in most cases have not yet used them in practice. With the benefit of hindsight, we now know that the cushions accumulated in the run-up to the crisis (capital buffers, liquidity reserves) were too small, so that when the crisis erupted there was little that policymakers could do in the way of releasing instruments in a countercyclical fashion. In other words, in many countries MAP policies were "at their lower bound", leaving little room for policy action.[3]

Second, the distinction between MAP measures and unsophisticated monetary policy measures is often not clear-cut. At least some policies and tools that are labelled "macroprudential" in emerging economies were *de facto* substituting for insufficiently developed monetary policy frameworks. This, for example, is the case of reserve requirements and quantitative limits on credit.[4] Hence, the available empirical evidence from emerging economies about MAP policy effectiveness may have to be interpreted with caution.

This caveat notwithstanding, the available empirical evidence suggests that MAP tools do have some effectiveness.[5] Moreover, recent research conducted at the Bank of Italy

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[2] These countries experienced both time-varying and structural measures. For example, the Brazilian authorities have experimented with capital requirements on new loans to households and reserve requirements; Turkey with foreign- exchange intervention and policy-induced volatility on short-term rates (to counteract large capital inflows), reserve requirements, LTV limits, and increases in risk-weights and general provisions on new consumer loans. Korea has implemented LTV and DTI limits on mortgage lending, levies on non-core foreign exchange liabilities and ceilings on banks' foreign exchange derivatives positions. Hong Kong has also used LTV and debt servicing ratios and haircuts on share margin financing and repo transactions.

[3] P. Angelini, S. Nicoletti-Altimari and I. Visco (2013), "Macroprudential, microprudential and monetary policies: conflicts, complementarities and trade-offs", in *Stability of the Financial System – Illusion or Feasible Concept?*, edited by A. Dombret and O. Lucius, Edward Elgar, and Bank of Italy, *Occasional Papers*, 140, November (2012).

[4] For example, in Italy, administrative controls on loans were used to steer monetary policy in the 1970s, when there was no liquid money market. Reserve requirements were used to absorb excessive monetary base.

[5] Among others, see G. Dell'Ariccia, D. Igan, and L. Laeven (2008), "Credit Booms and Lending Standards: Evidence from the Subprime Mortgage Market", *CEPR Discussion Papers* 6683; G. Dell'Ariccia, D. Igan, L. Laeven, and H. Tong with B. Bakker and J. Vandenbussche (2012), "Policies for Macroprudential Stability: How to Deal with Credit Booms", *IMF Staff Discussion Note* 12/6; C.H. Lim, F. Columba, A. Costa, P. Kongsamut, A. Otani, M. Saiyid, T. Wezel, and X. Wu (2011), "Macroprudential Policy: What Instruments

and elsewhere, also using theoretical calibrated or estimated models, finds that cooperation between monetary and macroprudential policies in targeting financial imbalances may lead to significant gains.[6]

All in all, in developed and emerging economies alike, there seems to be a lot to learn in this field: about the true degree of independence of MAP tools from other policies; about the independence of the various MAP tools from each other. And about some important conceptual and practical issues that deserve attention to make MAP instruments fully operational, an issue to which I turn in the next two sections.

3. Conceptual issues on the use of macroprudential tools

Lists of potential MAP tools have been drawn up by many authorities.[7] The ESRB has put up for internal use a list so exhaustive as to earn the label "the yellow pages". But nowhere more than in this field is actual progress likely to come from a learn-by-doing approach. Therefore, in this section I will focus on some of the issues that might challenge the effective implementation of MAP policy, such as 1) the scope of application of MAP tools and the risk of policy circumvention and leakages; 2) the possibility of symmetric (versus asymmetric) impact of the MAP measures; and 3) the speed at which policy tools can be adjusted. Finally, in Section 4 I shall discuss a number of operational challenges in Europe.

3.1 Scope of application of MAP tools: broad or targeted? Circumvention and leakages

Broad versus targeted instruments. A first issue relates to the scope of application of MAP tools. Some instruments are system-wide, and therefore well-suited to lean against the build- up of imbalances or risks in the entire financial system. For instance, during a generalized credit bubble system-wide countercyclical capital buffers, or liquidity and reserve requirements, are likely to be effective in curbing the build-up of risks and endowing the system with loss absorption capacity. However, they can be blunt tools to counter a sector- specific overheating. In this case, the tightening required for a system-wide tool to work would be unrealistically high, not cost-effective and rife with side-effects.

Targeted instruments may be more suitable for dealing with risks arising in particular segments or subsectors of the financial system (examples are sector-specific capital requirements, LTVs, and limits on foreign exposures).[8] However, targeted measures tend

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and How to Use Them? Lessons from Country Experiences", *IMF Working Papers* 11/238; G. Terrier, R.O. Valdés, C.E. Tovar, J.A. Chan- Lau, C. Fernández-Valdovinos, M. García-Escribano, C. Medeiros, M. Tang, M. Vera Martin, and C.W. Walker (2011), "Policy Instruments to Lean Against the Wind in Latin America", *IMF Working Papers* 11/159.

[6] P. Angelini, S. Neri, and F. Panetta (2011), "Monetary and Macroprudential Policies", Bank of Italy *Working Paper* 801; Angelini, Nicoletti-Altimari and Visco, (2013), op. cit.; L. Gambacorta and F.M. Signoretti (2013), "Should Monetary Policy Lean against the Wind? An analysis based on a DSGE model with banking", Bank of Italy, *Working Paper*, forthcoming; S. Claessens, K. Habermeier, E. Nier, H. Kang, T. Mancini-Griffoli, and F. Valencia (2013), "The Interaction of Monetary and Macroprudential Policies", *IMF Policy Paper*; O. Blanchard, G. Dell'Ariccia and P. Mauro (2013), "Rethinking Macro Policy II: Getting Granular", *IMF Staff Discussion Note*, 13/03.

[7] The set of core instruments includes the countercyclical bank capital buffer, envisioned in the Basel III regulation; changes in sectoral risk weights, a tool recently assigned to the UK Financial policy committee; limits on loan-to- value, on debt-to-income ratios; and so on.

[8] The scope of the instruments can be very narrow, to the point that one may question whether they are really macroprudential in nature. For example, in Korea LTV limits were envisaged for mortgages in specific areas of Seoul, where real-estate conditions were considered speculative. See D. Igan and H. Kang (2011), "Do Loan-to-Value and Debt-to-Income Limits Work? Evidence from Korea", *IMF Working Paper* 11/297.

to be more prone to two related problems: circumvention/elusion and leakages/waterbed effects.

Circumvention/elusion occurs when the agents to which the policy measure is directed find ways to mitigate or even neutralize it. Leakages/waterbed effects arise when the agents to which the measure is directed are fully affected, but other sectors are also affected and adjust their behaviour so as to contain the impact of the measures. Due to these effects, MAP policy can at best lose effectiveness; at worst, it can exacerbate imbalances in parts of the system.

Circumvention/elusion. Macroprudential tools and policies are prone to circumvention, but this is also true of most regulation. Is there anything that makes MAP tools different? Two remarks are in order.

First, the problem of circumvention tends to be more acute when MAP measures are targeted. A few examples may help to clarify this claim. First, consider the case of LTV limits on mortgages. Faced with these limits, banks may use alternative products, such as personal loans, to expand their real-estate exposure beyond the established limits, reducing the measure's effectiveness. Similarly, intermediaries may circumvent sector-specific capital requirements by extending personal loans to entrepreneurs rather than to their firms, hence avoiding additional capital absorption. By the same token, borrowers may elude limits on the debt-to-income (DTI) ratio by tapping multiple lenders, who have no way of controlling circumvention unless a central credit register is in place. Even where such an infrastructure exists, the borrower would still be able to elude the limit by having other household members apply for the loan.

Finally, consider also the case of instruments targeted to maturity mismatches, such as the limit on long-term foreign currency lending established in South Korea in the 1990s: at least 70 per cent of foreign-currency loans with maturity above 3 years had to be matched by foreign currency liabilities with the same maturity threshold. As Korean banks had little if any access to long-term foreign currency funding, they entered funding contracts with maturity of 3 or more years but with early reimbursement clauses, so that in practice the maturity was much shorter (1 year or so).[9] This allowed them to borrow at relatively cheap rates, formally complying with the regulation but de facto eluding it.

My second remark is that elusion is more likely to occur during cyclical upturns. Consider again one of the above examples: lenders know well that the credit risk of lending to an entrepreneur is the same as that of lending to his/her firm. When optimism prevails and risk aversion is low, they will be more willing to overlook prudency. Indeed, elusion requires lenders and borrowers to collude, and this tends to be more likely in the positive phase of the business cycle, exactly when the tightening measures should be taken. As I shall argue below, this may have consequences for the effectiveness of MAP policies over the cycle.

Leakages/waterbed effects. A related problem is the risk of leakages (or waterbed effects), which occur when MAP policy measures propel imbalances elsewhere in the system. This is also a special case of the tendency of regulation to push activity towards the less regulated part of the financial system (such as the shadow banking system). But the effect may also arise within the regulated financial system. For example, in the UK, between 1998 and 2007, the resident branches of foreign banks – which unlike subsidiaries, are not subject to host country regulation – increased lending in response to tighter capital requirements on domestic regulated banks, thereby offsetting about one third of the tightening manoeuvre.[10] The reciprocity arrangements included in the Basel III package

[9] J. Kyu Lee (2013), "The Operation of Macroprudential Policy Measures: The Case of Korea in the 2000s", *Bank of Korea Working Paper*, 2013–1.

[10] S. Aiyar, C.W. Calomiris, and T. Wieladek (2012), "Does macropru leak? Evidence from a UK policy experiment", *Bank of England Working Paper No. 445*.

and the CRD-IV/CRR package address the waterbed effect for the Countercyclical Capital Buffer, although other tools remain uncovered by formal reciprocity provisions.

What are the solutions? What, if any, are the solutions to circumvention and waterbed effect? There clearly is no silver bullet, but policies can help to mitigate problems.

First, effective micro supervision can go a long way towards addressing circumvention. In particular, a system that relies heavily on on-site inspections would create a strong deterrent against elusive behaviour. Refer to one of the above examples, in which a bank uses personal loans to elude sector-specific capital requirements or LTV limits: on-site inspections would very likely uncover this behaviour. Effective supervision would also alert the authorities to waterbed effects, allowing them to take swift corrective action. While effective supervision and extensive on-site inspections are costly, for both the supervisor and the intermediaries, the crisis has demonstrated that the cost of inadequate supervision can be huge. To the extent that elusion requires collusion between lenders and borrowers, on-site supervision should be intense also during positive phases of the business or financial cycle.

Second, in response to elusion and waterbed effects, authorities may broaden the scope of their policies, e.g. with the simultaneous use of complementary macroprudential tools, rather than a single targeted tool. The possibility to circumvent an LTV limit could be substantially reduced if it were used together with a DTI limit consolidated at borrower level. In fact, while the former would limit the loan exposure relative to the collateral value, the latter would constrain the level of overall lending to each given customer based on his/her income. A similar argument can also be made for the sector-specific capital requirements and DTI.[11]

Third, authorities can extend the perimeter of regulation dynamically in order to include segments of the system that have become systemically relevant (UK legislation has granted this power to the FPC).[12] In this respect, the comprehensive approach adopted in Italy – where all financial intermediaries are subject to supervision, with appropriate proportionality – has some merits.[13]

Finally, it should be clear from the above examples that effective cross-border cooperation among authorities is another important method of fighting spillovers. My assessment is that at present, unfortunately, centrifugal forces seem to prevail, in Europe as elsewhere.

3.2 Is the functioning of macroprudential tools symmetric or asymmetric?

Another issue to address in order to make MAP tools operational relates to their symmetric or asymmetric effectiveness along the financial cycle. The premise is that MAP measures are effective if and only if they impose – or remove – economically binding limits, that is, if they are more stringent than the constraints imposed on intermediaries by voluntary decisions or by market pressures. For example, if during recessions risk aversion or market pressures raise banks' desired capital ratios above regulatory thresholds (a situation that applies to many economies in the current environment), a policy of releasing capital constraints (e.g. via the countercyclical buffer) would have no effect:[14] the authority would find itself pushing on a string. This reasoning suggests two considerations.

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[11] As pointed out by Blanchard et. al. (2013), op. cit.

[12] Bank of England (2013), *The Financial Policy Committee's powers to supplement capital requirements*, A Draft Policy Statement, January.

[13] Under this approach, regulatory and supervisory actions are proportional to the intermediary's importance.

[14] D. Diamond and R.G. Rajan (2009), "The Credit Crisis: Conjectures about Causes and Remedies", *NBER Working Paper* No. 14379; R.G. Rajan (2005), "Has Financial Development Made the World Riskier?", *NBER Working Paper* No. 11728.

First, MAP tools should in principle be more effective during upswings of the financial cycle: when optimism prevails, market constraints are weaker and banks typically hold less excess capital or liquid buffers. However, as already mentioned, during such times incentives towards elusion are likely to be stronger. These two offsetting effects make it hard to gauge whether MAP instruments are more effective during upturns than downturns.

Second, for an effective release of some MAP tools in bad times, there must have been an adequate tightening in good times. This is vividly illustrated by the behavior of capital ratios during the current crisis. Large banks, typically endowed with thin capital buffers, reacted to the downturn by increasing capital procyclically. By contrast, small banks, which entered the crisis with large capital buffers, effectively acted as stabilizers. There is clear evidence of this behaviour for both the US and the European banking systems (see Figure 1).[15]

The IMF has recently analysed the degree of symmetry of MAP policies, without reaching firm conclusions. In the 36 countries examined, between 2000 and 2011 the cases of policy tightening far outnumbered the episodes of loosening. Most of the loosening measures, often consisting in the relaxation of previously tightened instruments, occurred after 2008. The econometric exercise is inconclusive on whether MAP measures have symmetric or asymmetric effects, but the results have to be interpreted with caution, as the incidence of loosening events may be too small to detect statistically significant differences.[16]

3.3 Adjustment of policy tools: speed, size

The speed at which policy tools can be adjusted also deserves attention. In the Netherlands, a recent decision by the government (contained in the 2012 Stability Programme) forsees a gradual lowering of the maximum LTV ratio from 106 per cent in 2012 to 100 per cent. The decline is expected to take place at a pace of about 1 percentage point per year. As a comparison, in Italy the average LTV declined by almost 10 percentage points from 2006 to 2012 – about 1.6 percentage points per year. This is a much faster adjustment – note that it was not driven by the regulator, but by banks' autonomously adopted policies. What is the right adjustment speed? A look at housing market cycles provides insights in this respect. Both upturns and downturns in housing cycles in advanced countries last on average around 5 years.[17] This suggests that the tightening pace adopted in the Netherlands might be too slow, with risks that the countercyclical policy could be fully effective only at the turning point of the cycle. This is not a criticism;[18] I just mean to illustrate a general point. My assessment is that our knowledge in this area is particularly poor, and that we must make the most of the empirical evidence that will accumulate from future policy experiments.

The speed of adjustment is clearly related to the size of the adjustment. For example, the countercyclical capital buffer will have to be managed taking into account that an increase, say, will affect all banks at the same time. Therefore, a sudden, sharp increase could

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[15] S.G. Hanson, A.K. Kashyap, and J.C. Stein (2011), "A Macroprudential Approach to Financial Regulation", *Journal of Economic Perspectives*, 25(1): 3–28 and Angelini, Nicoletti-Altimari and Visco (2013), op. cit..

[16] E. Nier, H. Kang, T. Mancini-Griffoli, H. Hesse, F. Columba, R. Tchaidze, and J. Vandenbussche (2012), "The Interaction of Monetary and Macroprudential Policies – Background Paper", *IMF Policy Paper*. The analysis suggests that the effect on credit growth of changing the reserve requirement is stronger when loosening than when tightening. On the other hand, the effect on house prices of changing LTV ratios is stronger for tightening than for loosening. For the other macroprudential tools considered there is no significant difference.

[17] S. Claessens, A. Kose, M. Terrones (2011), "Financial Cycles: What? How? When?", *IMF Working Papers*, 11/76.

[18] The policy move in the Netherlands may be structural in nature, since LTVs exceeding 100 per cent are probably questionable apart from cyclical considerations.

send many banks scrambling for funds at the same time, generating a system-wide dearth of capital. Of course, this makes this tool potentially very powerful.

4. Operational challenges in Europe

Let me now turn to two practical aspects in the implementation of macroprudential tools on which significant progress is required, with a focus on Europe.

4.1 Gaps in the statistical framework

One not very glamorous but key issue is the question whether statistical reporting is adequate to help ensure policy implementation and instrument effectiveness. Consider the housing market. Housing market cycles differ substantially across countries (Figure 2), suggesting that MAP policies aimed at curbing problems of overheating in the real-estate sector should be tailored to the national situation. The regulation being finalized in the EU (CRD-IV/CRR) properly allows for national leeway. In line with this evidence, a recent survey among euro-area NCBs, conducted by the Bank of Italy and presented in our latest Financial Stability Report, shows that there is substantial dispersion of average LTV ratios in the euro area.[19] Ratios on new loans in 2011 ranged from below 60 per cent in some countries to more than 100 per cent in others (Figure 3; one must bear in mind that LTV is not yet a MAP instrument in most EU countries).

There is also significant heterogeneity in the underlying statistics. For example, the survey just mentioned showed differences with regard to the LTV definitions and the methods of collecting and aggregating data across Europe. Should the value of the real estate be recorded at mortgage issuance? Or, should it be updated? If so, how? Should there be a difference between first homes and other houses? The list could continue. Each different answer to any of these questions may give rise to methodological differences in computed LTVs. These discrepancies hamper cross-country comparisons; going forward, they can hinder MAP implementation and coordination among the euro-area countries. Work to harmonize statistics in this field is beginning in the light of the forthcoming establishment of the Single Supervisory Mechanism (SSM).

Consider next non-performing loans (NPLs). These are arguably key pieces of information for micro as well as for macroprudential policies. But lack of a harmonized definition, even at the European level, prevents robust cross-country comparisons. As an example, the definition used by Italian banks – which is set by the Bank of Italy – is generally broader and more rigorous than elsewhere in Europe.[20] Our analyses show that, controlling for differences in the way collateralized positions are treated in the definition of NPLs, Italian banks would display on average substantially better NPL and coverage ratios (Figure 4). Also, the dynamics of the two ratios would change substantially: whereas the official coverage ratio decreased by 1.5 percentage points between 2009 and 2012, the "adjusted" ratio (computed according to the methodology used by a sample of large European banks) would increase by 3.3 points. What is more, this is just one of the factors affecting cross-country comparison of NPLs. Other differences emerge, e.g. with respect to the definition of restructured loans. A cross-country comparison that fails to take these methodological problems properly into account would be misleading. The issue is clearly thorny, because changing well-established national practices to converge to a uniform standard entails

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[19] Bank of Italy (2013), Financial Stability Report, No. 5, April. (http://www.bancaditalia.it/pubblicazioni/stabilita-finanziaria/rapporto-stabilita-finanziaria/2013/rsf_2013_5/en_stabfin_5_2013/Financial-Stability-Report-5.pdf).

[20] See S. Barisitz (2013), "Nonperforming Loans in Western Europe – A Selective Comparison of Countries and National Definitions", in Oesterreichische Nationalbank, Focus on European Economic Integration, Q1/13 (http://www.oenb.at/de/img/feei_2013_q1_studies_barisitz_tcm14-253775.pdf). The study suggests that, in international comparisons, NPL ratios for Italian banks are biased upwards.

adjustment costs, which generate resistance. The asset quality review that planned under the developing SSM should address these problems.

A last example concerns indicators of banks' funding/liquidity conditions. For lack of data, the funding gap is often approximated by the loans-to-deposits ratio (this was standard practice in the IMF GFSR until recently, and it still is in the FSR of the European Central Bank). However, correct measurement of the gap should consider *all* sources of retail funding, including bank bonds subscribed by retail customers (which proved to be as stable as retail deposits). Given large cross-country differences (for example, retail bonds are an important source of funding in Italy, but not in other countries), the use of rough measures, sometimes induced by lack of publicly available data, may misrepresent the true funding conditions of banks in some countries and alter international comparisons (Figure 5).[21]

4.2 The institutional framework in Europe

A full assessment of the institutional set-up for MAP policy in the European Union is premature, also in the light of the implementation uncertainties for the SSM. However, it is clear that the various reforms and regulations introduced have produced a very complex framework. An effort is necessary to minimize inefficiencies and foster an effective interaction among the different actors involved. Several key issues remain to be addressed.

The first has to do with the respective roles and powers of the SSM and the National MAP Authorities (NAs). The legislation being finalized (CRD-IV/CRR and the SSM Regulation) gives asymmetric powers to the two parties, with the ECB able only to tighten macroprudential tools above the regulatory minima and the NAs empowered to implement bi-directional policies. At the same time, however, a symmetric feature is also envisaged by the rules: the ECB can object to policy decisions taken by the NAs, which will in turn have to "duly consider" any such objections; the NAs can do the same with regard to ECB's decisions, and the ECB has also to "duly consider" the NAs' objections. As for this symmetry of "objection" powers, it remains to be seen who will have the final say if the objections are *not* duly taken into account. Without a tie-breaking mechanism, the risk of a stalemate seems by no means negligible.

A related issue is that of cooperation/coordination between the SSM and the NAs. This is explicitly addressed only for the tools included in the CRD-IV/CRR package. It is essential that work continue on the definition of a coordination framework also for instruments currently excluded from the European regulation, such as the LTV or the DTI ratios, as an equilibrium relying mainly on authorities' good will could turn out to be unstable. Such a framework would help address the risk that measures taken with a purely domestic perspective have negative spillovers on other countries.

A final issue concerns the interaction between the ESRB and the SSM, which is also likely to be complex. Should the ESRB be strengthened and made more independent from the ECB-SSM? Or should it be kept as a lean institution, in charge of coordination among SSM countries and other EU countries, and among central banks and supervisory authorities not represented in the SSM? The debate is in its early stages. Much will depend on how many EU countries join the SSM. While each solution has its pros and cons, the risk of an overcrowded arena in the MAP field is material.

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[21] In the October 2012 GFSR the IMF calculated a 176 per cent loan-to-deposit ratio for Italian banks. For the same date, a figure of 117 per cent can be derived once retail bonds are taken into account (see Bank of Italy (2012), *Financial stability report*, No. 4, November). In the GFSR published last April, following discussions with the Bank of Italy, the IMF itself included the correct definition of retail liabilities in their analysis.

To maximize the effectiveness of the MAP framework in Europe, a principle that should be heeded is that strong *microprudential* supervision is a necessary precondition for effective *macroprudential* policy. Indeed, MAP policy is to a large extent the use of microprudential tools with a macro perspective. It is therefore crucial to coordinate the use of prudential tools for both purposes. As an example, consider the actions that the Bank of Italy recently undertook with the aim of increasing bank provisioning, in order to improve investor confidence in Italian banks. With a macroprudential perspective, in order to avoid procyclicality the Bank of Italy at the same time asked banks to increase internally-generated resources by containing costs, disposing of non-strategic assets and aligning dividend policies to their balance-sheet and income strength. These actions should limit the risk that, in a context of weak economic activity and tight credit conditions, the increase in provisioning might lead to a deterioration in the availability of credit to the private sector.

5. Conclusions

Macroprudential policy may play a crucial role in preserving financial stability. But in this new field of policymaking, more than in others, we should keep in mind that no solution is obviously right or wrong. More experience is needed on the functioning of macroprudential authorities and the use of tools. As progress will inevitably follow from a learn-by-doing type of approach, policymakers should not shy away from carefully planned but bold experiments. Some countries are already moving in this direction. The signs of overheating that are emerging in some segments of the financial system may soon require appropriate macroprudential measures. Policymakers should not repeat the errors made in the run-up to the crisis, when many supervisors turned a blind eye to the imbalances that were building up in their economies.

Some conceptual steps need to be taken. First, elusion and waterbed effects may hamper the effectiveness of MAP policies, especially when measures are narrow. A system of tight micro supervision can go a long way towards addressing circumvention. The simultaneous use of complementary macroprudential tools, rather than a single targeted tool, can also help. Effective cross-border cooperation is key to fight spillovers. Unfortunately, at present centrifugal forces seem to prevail, in Europe as elsewhere.

Second, we need to explore carefully the degree of asymmetry of MAP tools over the financial cycle. In principle, MAP tools should be more effective during upswings, whereas during downturns market pressures may impose excessive constraints on intermediaries, making the policies of releasing the previously accumulated buffers less effective. In practice, however, during upswings incentives towards elusion are likely to be stronger. These two offsetting effects make it hard to establish whether MAP instruments are more effective during upturns than downturns. Also, for an effective release of some macroprudential tools in bad times, there must have been a substantial tightening in good times. The speed at which policy tools can be adjusted also deserves attention.

Third, a prerequisite to make progress in all of the above areas is to have a reliable statistical framework. The amount of work needed to harmonize key indicators for MAP policy is immense, even within the EU.

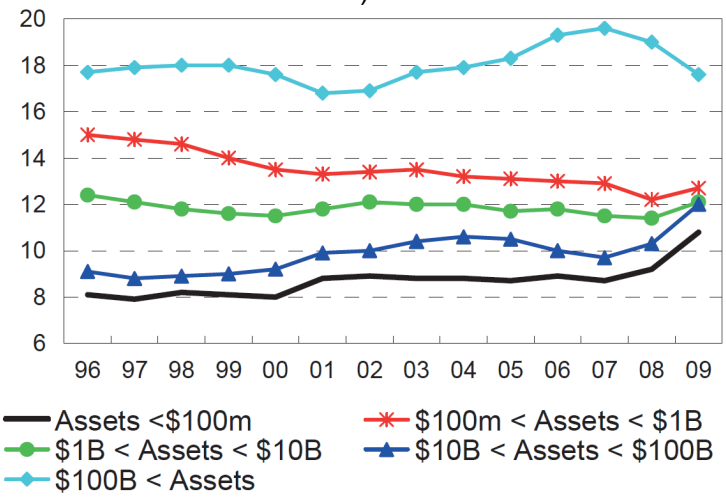
Finally, progress is needed in the definition of the institutional and legal framework for MAP policy. At the global level, the design of financial regulation involves, in different degrees, several authorities and supranational bodies (the G20, the FSB, the IMF, the BIS, to name just the main ones). The macroprudential arena is also very crowded. In Europe, tasks are today (or will be shortly) shared among the ESRB, the ECB, the European Commission, and the NAs. There is a material risk that such a proliferation of fora and decision-making bodies could end up complicating coordination and synergies. In this context, I believe that serious thought should be given to institutional simplification and a clear allocation of tasks.

Figure 1

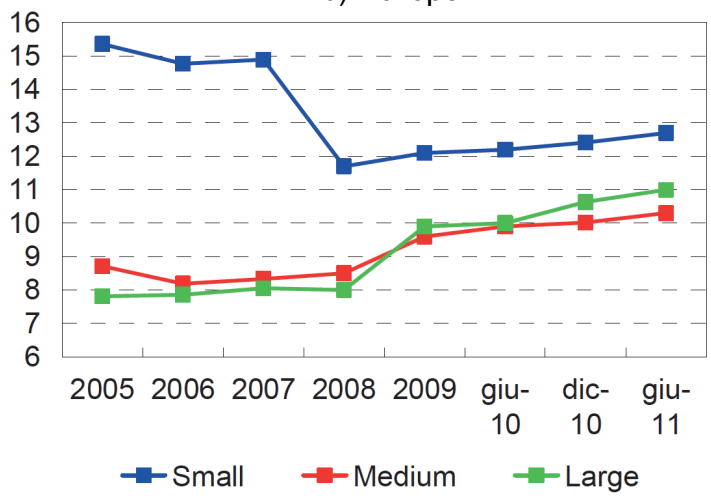
Tier 1 risk-based capital ratios for commercial banks, by bank size

(percentage points)

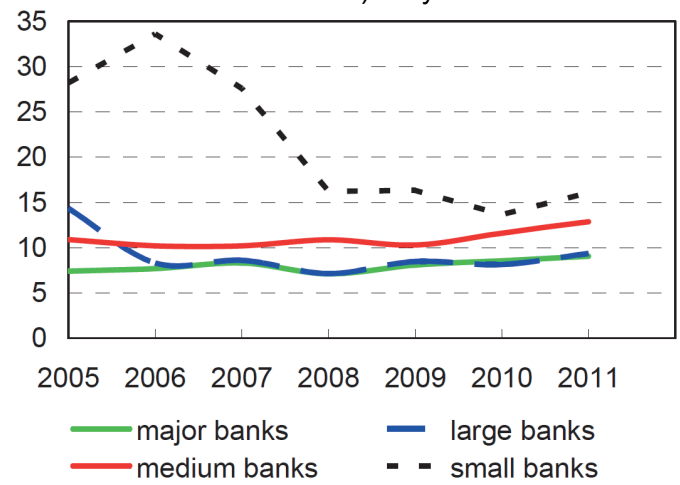
a) USA



b) Europe



c) Italy

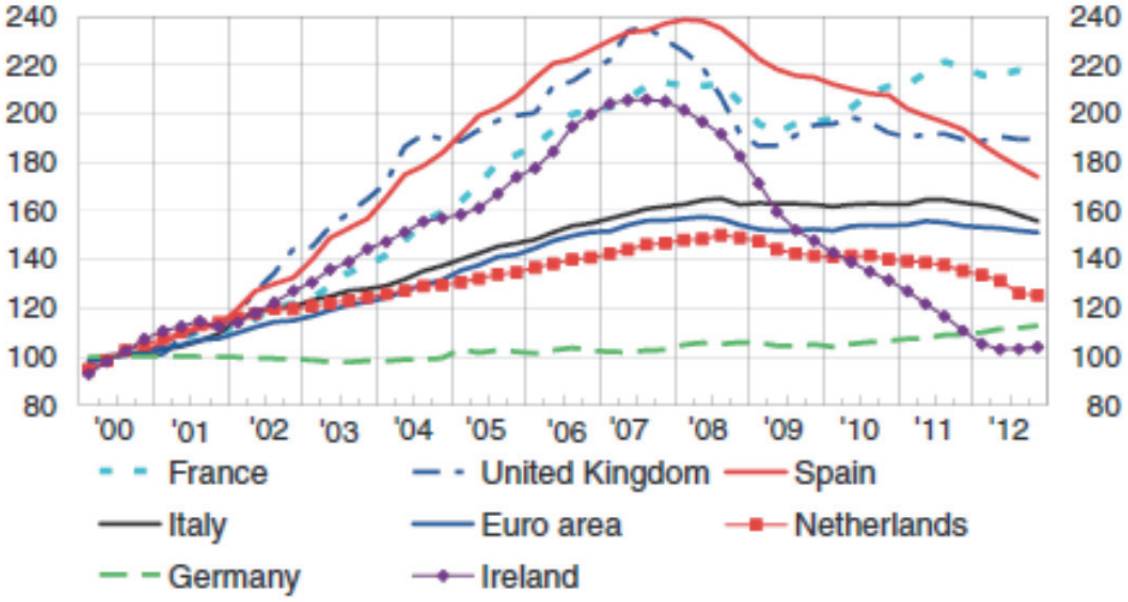


Source: Panel (a): Hanson, Kashyap and Stein (2011); panel (b): ECB; panel (c): Angelini, Nicoletti-Altimari and Visco (2013), op. cit.

Figure 2

House prices in Europe

(current prices; indices, 2000=100)

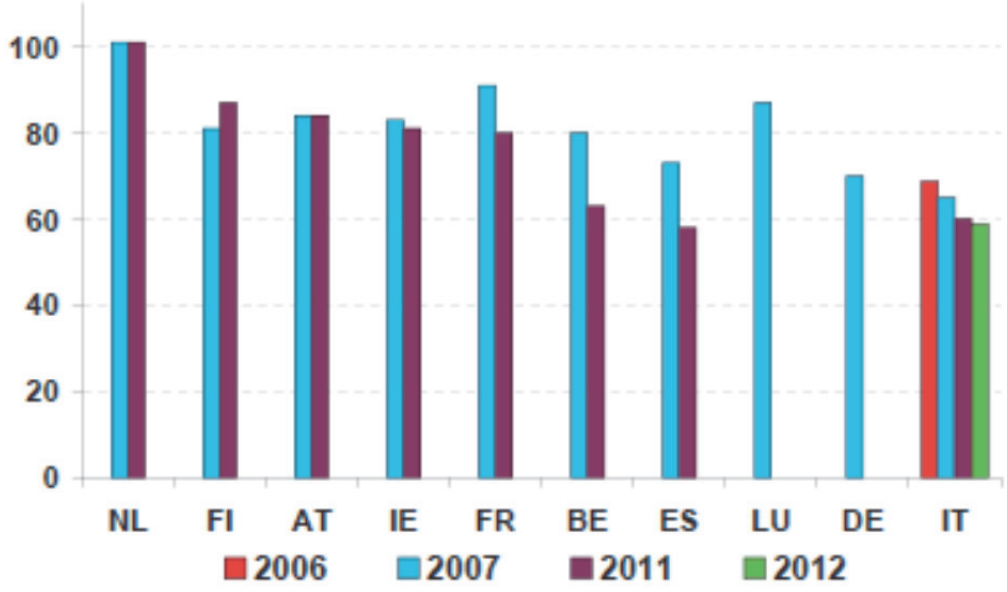


Source: National data and ECB.

Figure 3

Loan-to-value ratio in selected euro area countries (1)

(per cent)



Source: ECB, National central banks and EBA, as in Bank of Italy, *Financial Stability Report* No.5, 2013.

Figure 4

Effect of collateral and guarantees on the Italian banking system's NPL and coverage ratios (1)

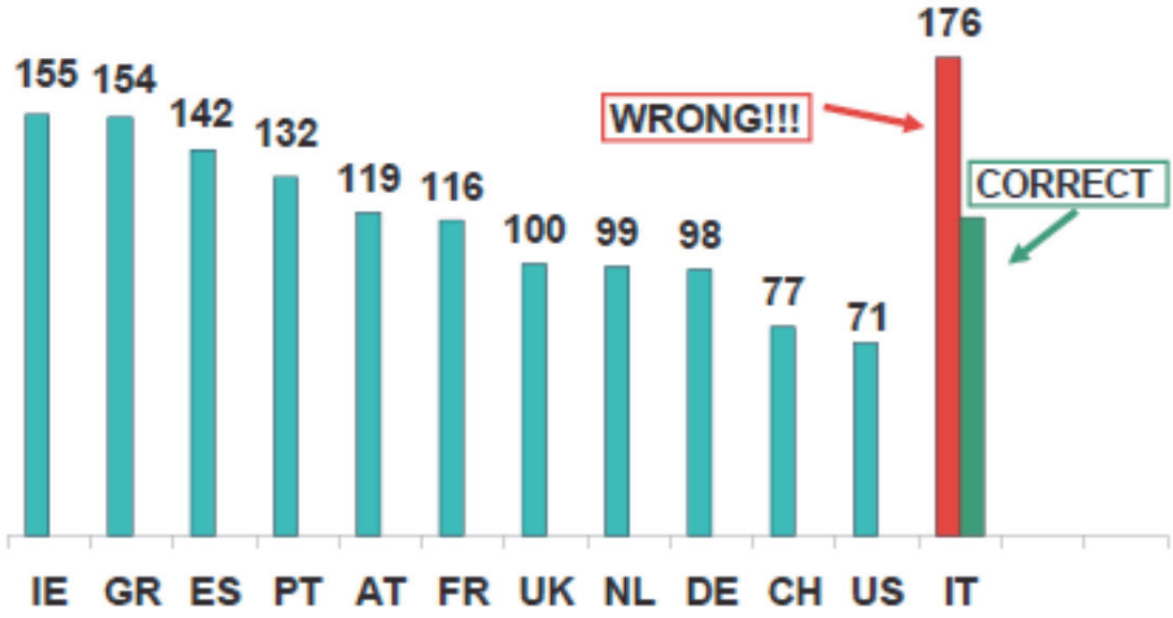
(per cent)

Source: Bank of Italy, *Financial Stability Report* No.5, 2013.
(1) Balance-sheet values are calculated on the basis of Italian regulations. Adjusted values are calculated by subtracting from non-performing loans those entirely backed by collateral or guarantees for which it is assumed that no losses are expected. For a detailed description, see note 4 to the text of the box "Non-performing loans and collateral and guarantees" Bank of Italy, *Financial Stability Report* No.5, 2013, p. 27-28.

Figure 5

Loan-to-deposit ratio in selected countries

(per cent)



Source: IMF October 2012 GFSR and Bank of Italy data.