Macroprudential policies in the Euro Area: Issues for the next ten years

Valerie Herzberg, St Antony's College, Oxford
Max Watson, St Antony's College, Oxford

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I. Introduction

The global and euro area crises have triggered regulatory changes that are designed to safeguard financial systems against systemic threats in the future. These changes include modifications to the Basel-endorsed bank regulatory regime that cover macroprudential as well as microprudential policies. Macroprudential measures, which are the focus of this paper, are directed to contain system-wide vulnerabilities as opposed to weaknesses affecting individual institutions. Reforms have also being initiated or proposed that would limit the scope of banks' trading activities. And resolution regimes are being created or changed to ensure a better pricing of risk and alignment of risk and responsibility including via a greater bail-in of private sector stakeholders. Details differ across countries, but the direction of change in these regulatory areas is the subject of broad agreement.

Less progress has been made in developing a consensus on the specific way in which macroprudential measures should be designed, triggered, and coordinated with other policy actions, in seeking to boost structural resilience or to pre-empt or dampen destabilising trends in the economy. For example, what trade-offs are involved in determining whether to use macroprudential tools? Should they be relied upon to dampen cyclical credit or asset price swings or should a complementary role be played by interest rates? Which actors should have prime responsibility for implementing macroprudential measures, and what about coordination with other policy actors? Does the potential role and contribution of such measures differ as between economies with floating and fixed rate regimes? How effective will macroprudential tools prove to be in different economic and financial contexts?

The euro area presents a special case in several of these respects and the envisaged banking union will add another layer of complexity. At the area-wide level, of course, similar questions arise about trade-offs between monetary and macroprudential policy. But individual member states do not have autonomy in using interest rate policy and their economic structures differ markedly from each other: following country-specific shocks, monetary conditions in their economies can be significantly mismatched with their domestic cyclical position over an extended period - which may change the domestic financial environment in ways that increase macroprudential risks. The region also features a multiplicity of actors - not just at the national level but at the EU and euro area levels. The ECB and national central banks via the SSM and the ESRB have responsibilities for macroprudential analysis and action, and the Commission and Council can trigger the Macroeconomic Imbalances Procedure.

By Valerie Herzberg, Senior Member of St Antony’s College, Oxford and Max Watson, Director, Political Economy of Financial Markets Programme, European Studies Centre, Oxford
and fine member states for non-compliance in correcting macroeconomic imbalances. Moreover, financial markets in the euro area are (highly) integrated: this may also matter for the efficacy of macroprudential measures implemented at the national level only.

This paper explores the role and contribution of macroprudential policies in the euro area. It seeks (in Part I) to place the use of macroprudential instruments in a historical context, recognising that there was much relevant experience during previous decades, both in Europe and other regions. In the euro area setting, the paper sees macroprudential policies as playing a potentially important role, given the absence of national monetary policies, the prevalence of highly bank-centric financial systems, the limited flexibility of individual economies and the potential costs of financial instability - including through contagion channels. The institutional framework for initiating and coordinating policies influencing financial stability is also discussed.

Against this specific euro area background, the paper goes on (in Part II) to consider the role and effectiveness of individual macroprudential tools. Based on earlier experience, it warns about inherent limitations in the effectiveness of macroprudential measures, seen in isolation and from a cyclical perspective. Achieving 'macroprudence', the focus of Part III, will typically require the coordination and alignment of macroprudential actions with other policies - such as very strong microprudential and resolution regimes, and a well-judged fiscal policy, at the national level; and it will also be dependent on the degree of rigidity of the real economy. It also requires macroprudential coordination across countries to contain leakages and spillover effects. Particular attention needs to be paid to the complex institutional set up in the euro area and the sharing of competences, which could foster inaction. Finally, 'macroprudence' also requires a simultaneous structural boost to financial sector resilience, be it through structural macroprudential measures or a more radical approach to downsize and simplify the banking sector. All this is necessary against the backdrop of a gradual but considerable regime shift, namely the establishment of the banking union.
II. Macroprudential policymaking: An old and well-known necessity

A. A historic overview

A view commonly held these days is that financial stability was not a key priority of the pre-Great Crisis days. Instead, a focus on low inflation only, coupled with a belief that markets would be self-regulating, provided a setting where credit and financial sector developments were allowed to spiral into unsustainable credit and asset price booms in many parts of the developed and developing world. This was certainly true in the United States, the United Kingdom and in most parts of the Eurozone. In the latter, the argument that Balassa-Samuelson catching up effects were at play, a weak policy mandate for the Center to intervene and a political bias towards inaction (who wants to spoil the party?) prevented corrective measures. But the term ‘macroprudential’ is not new, it appeared in internal documents of the precursor to the Basel Committee already in the late 1970s. Also the disregard for financial stability concerns was not universal. The reality was that much of Eastern Europe was engaged in significant soul-searching about how to handle surges of capital inflows and an explosion of house prices and domestic credit. This held independently of the monetary regime. When fiscal policies reached the limit of political feasibility – both in aggregate terms and as regards individual measures – a whole panoply of macroprudential policies was called upon. Increases in capital requirements and reserve requirements were widely used. Also, in Asia, having learnt the lessons of the regional crisis in the mid 1990s, governments responded to the threat of new bubbles through activist policies. Faced with signs of overheating in the commercial real estate sector financed through significant short term whole sale borrowing, the Bank of Korea in the mid 2000s tightened liquidity regulation of local banks.

Importantly, the example of Korea shows that it was not just developing and catching-up economies that saw a need for such policies. Indeed, Hong Kong and Australia have long standing traditions of taking financial stability concerns seriously – even if their respective regulators may have somewhat diverging views on the usefulness of particular macro prudential tools. The two examples demonstrate that such concerns can indeed be independent of the monetary regime, though the activism in the case of Hong Kong highlights the particular need for alternative instruments in the presence of a hard peg.

If one now takes a broader perspective, it becomes obvious that even countries like the United States have a long history of macroprudential policy making. Controls on the financial sector persisted well after the end of the Second World War and active use of what we would now term macroprudential policies was made right up into the 1980s. Frequently the authorities made use of changes in reserve requirements - in both directions of the cycle - and also employed more targeted

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2 Giovanni Dell'Ariccia, Deniz Igan, Luc Laeven, and Hui Tong, with Bas Bakker and Jérôme Vandenbussche, "Policies for Macrofinancial Stability: How to Deal with Credit Booms", IMF Discussion Paper (2012)
4 "Loan-to-value-ratio as a macroprudential tool - Hong Kong SAR's experience and cross-country evidence", HKMA, BIS Papers 57; Luci Ellis, "Macroprudential Policy: A Suite of Tools or a State of Mind?" (2012)
measures such as down payments or other housing related policies. 1980 possibly represented a high-point, with the Fed implementing credit controls on a large scale. 5 In the United Kingdom variable controls were applied to some forms of consumer credit, and constraints were also placed periodically on the growth of banks’ assets or deposit liabilities. Until not too long ago this kind of policy setting would have been described under the more pejorative label of financial repression – highlighting of course that the associated risks and costs are not to be underestimated.

B Macroprudential policy goals in the EMU context

Macroprudential policies are concerned with a range of vulnerabilities in the economy. These include destabilising credit and property cycles; balance sheet risks, such as exposure to foreign exchange, interest rate, and liquidity shocks; and systematic mispricing of risk, which may reverse suddenly with disruptive effects. In some cases these challenges raise important questions of coordination or trade-offs with other branches of policy, such as monetary and fiscal responses to emerging credit cycles. They also raise widely debated questions about institutional leadership and coordination, and about the design of policy frameworks that can help foster and protect pre-emptive action to forestall emerging vulnerabilities.

In the context of EMU, however, the nature of macroprudential challenges, the institutional setting, and the contribution of well-targeted policy responses take on a special importance. The determining feature of this nexus is the absence (at the level of the member countries) of an independent monetary policy, and the potential issues that this can raise in economies that still fall some way short of being an optimal currency area.

The distinctive macroprudential challenge under EMU concerns country-specific economic and financial cycles. When economies in the euro area undergo shocks that have asymmetric effects, one or more of these economies may embark on a boom or a recession that sees cyclical conditions move significantly out of line with the common monetary policy. (In this discussion, the case of a country-specific boom is used to simplify the exposition.) As inflation increases, the degree of monetary misalignment will grow, in terms of nationally measured real interest rates - at least until a continuing loss of competitiveness eventually slows the economy down and reverses the rise in wages and prices.

In principle, market mechanisms should operate to bring cyclical conditions in the economy back in line with the euro area average, after a period of divergence and of associated imbalances. If wage and price setters are relatively forward-looking, and if risk premia increase in line with prospective banking and fiscal vulnerabilities, then the loss of competitiveness and widening of the current account deficit in a booming economy could in theory prove relatively short-lived. Markets would finance the associated intra-euro-area imbalances smoothly. Moreover, the subsequent adjustment path would

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not 'overshoot' in an unstable cycle of credit rationing for banks and sovereigns, contracting leverage, forced procyclicality in national policies, and eventually overly depressed wages.

The evidence of recent experience in the euro area, however, is that these market mechanisms did not work sufficiently well to avoid a crisis. Moreover, in some cases financial markets - rather than dampening cyclical developments through a rise in risk premia - responded to persistently low or negative real interest rates by embarking on a destabilising credit and property cycle. Lacking effective bank resolution regimes, this amplified vulnerable feedback loops in the economy, especially between the creditworthiness of banks and their governments.

While learning may occur among market participants over time, in both the real economy and the financial sector, it would not be safe to rely on this to ensure a smooth adjustment path under EMU in the wake of future asymmetric shocks. Indeed, even the most flexible of economies (like the US) struggle with the practical rigidities that the contraction of debt imposes and the difficulty to design efficient and fair bankruptcy, debt restructuring and foreclosure mechanism. The particularities of home ownership - houses representing illiquid, hard to value and socially sensitive assets that are typically considerably debt financed - add to the complexity of private sector debt overhangs and thus call for the mitigation of housing bubbles.

Official policies at the national level thus need to be framed in a more forward-looking way and their goals should be twofold:

First, to structurally boost the resilience of the financial sector: In the Euro area this is a particular concern, given the aforementioned presence of asymmetric shocks and hence the need for regionally concentrated banks to be structurally more resilient and able to absorb these shocks.

Second, to dampen country-specific economic cycles: the underlying aim is to ensure that wages and prices do not move widely out of line with fundamentals and then get 'stuck' at this level, and that the scale and duration of imbalances do not lead to a major misallocation of resources through the financial sector, trigger credit rationing or financial instability. The main instruments available to achieve this dampening and easing at the national level and to ensure greater resilience are fiscal and macroprudential policies. The potential role for fiscal policy – both structural and time-varying – is set out in the accompanying Box.

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Box: The role of fiscal policy in credit cycles

This Box considers in what ways fiscal policy can contribute as a complement to macroprudential policy.

Before considering questions of discretionary fiscal action, a fundamental issue is to assess correctly what is the underlying structural fiscal stance. As with monetary policy, this assumes the ability of policy makers to estimate the output gap correctly, and in the case of fiscal policy it assumes also an estimate of sustainable budget revenues. Both of these requirements need revisiting.

During the run-up to the financial crisis, estimates of the output gap proved procyclical, and policymakers confused the transient revenues from financial booms with durable budgetary income. Indeed, a number of studies over the past decade have shown that both the output gap and the structural level of budget revenues are prone to particularly severe and pro-cyclical measurement errors during financial booms. Perceived structural fiscal surpluses in Ireland and Spain in the run-up to the crisis were later reassessed as structural deficits – and in the case of Ireland, based on IMF data, the ‘correction’ in the structural fiscal stance in 2006 was some 7 percentage points of GDP.

It is notable, however, that in the run-up to the crisis contemporaneous country-specific analysis had proved capable of 'seeing through' this measurement problem and achieving much more accurate real-time estimates of the fiscal stance than the numbers emerging from top-down, standardised EU and IMF estimation procedures of the structural fiscal position. Martinez Mongay et al correctly estimated contemporaneously that the structural fiscal position of Spain circa 2007 was overestimated by some 3 percentage points of GDP. This is encouraging for the future - although this kind of approach is very data intensive and may not be reproducible for all EMU members.

An additional way in which fiscal policy can play a structural role in strengthening financial stability is through removing tax incentives that encourage leverage, e.g. (mortgage) interest deductibility. The latter made important contributions to the build-up of household debt in Spain, Ireland or the UK.

A further question is whether or when discretionary measures should be used to 'lean against the wind' and thus dampen the amplitude of countries' current account and competitiveness cycles. If the real economy is flexible, agents are forward-looking, and financial linkages are not vulnerable, then the operation of automatic stabilizers might be thought enough. However, the experience during the euro area crisis suggests that agents in both the labour and financial markets are not sufficiently forward looking, and that serious overshooting of wage costs and financial markets may take place. Minimising output costs and public debt increases from such developments would seem to warrant discretionary fiscal action to preempt – or at least dampen – destabilizing imbalances.

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The focus of the present paper is with the design and institutional framing of macroprudential policies in the context of country-specific shocks, rather than with the coordination of macroprudential and fiscal policies. In the EMU setting, this question of framing macroprudential policies poses four distinct sets of issues.

First, what should trigger actions to tighten macroprudential policy? The guiding principle would be to tighten macroprudential policy at an early stage, as the macroeconomic conditions likely to foster a financial cycle emerge, without waiting for clear signs of financial stress or misallocation. The most basic warning sign is a backdrop of mismatched monetary policy conditions, high levels of risk tolerance and financial innovation of a kind that can lead to impaired transparency and changes in patterns of risk allocation. All three cannot be observed directly and there is not one indicator or a fixed set of 'hard data' to follow blindly. On the contrary, policy decisions will need to factor in much 'soft' data, precisely because 'risks are often taken in opaque ways that escape conventional measurement practices'. 10 And, because 'the financial system looks strongest when it is most fragile'. 11 In addition, the trigger would also need to be based on a comprehensive assessment of the financial stability vulnerabilities of an economy and of the cost-benefit analysis of tolerating such vulnerability - in particular, on how flexible an economy is and on how much policy space there is to manage the fallout in case of risk materialization. It is likely that across the Euro area, given the diversity of countries, the type and timing of potential triggers differ. In practice, the EU Macroeconomic Imbalances Procedure (see below) via the scoreboard and in-depth reviews makes use of a wide range of analytical tools, datasets and statistics, both forward and backward looking in order to get a comprehensive understanding of the origin and nature of private sector imbalances.

Second, what instruments should be activated? The experience of Ireland and Spain during the run-up to the euro area crisis suggests that the application of a single macroprudential measure on a modest scale is not likely to have a major effect. It seems plausible that both supply-side measures (such as counter-cyclical capital buffers) and demand-side measures (such as loan-to-value ratios) may need to be called on. Indeed, the more broadly-based discussion later in this paper on the effectiveness of such measures raises questions how effective such actions are likely to prove, even in the best of circumstances.

Third, to what extent is cross-border coordination needed? The goal of EMU is to achieve, over time, a very high degree of financial integration - even if the impact of the euro area crisis has been to partially reverse this at present. In a highly integrated financial setting, spillovers and leakages need to be squarely addressed. This means systematically activating - from an early stage - the principle of 'reciprocity' under which partner countries activate complementary measures to

10 J Stein, Member of Governors of the Federal Reserve System, "Overheating in credit markets: origins, measurements and policy responses", February 2013
prevent their banks undermining macroprudential restraint in the affected economy. The question could be raised whether this is tantamount to introducing capital flow restrictions within the monetary union. After all, by tightening macroprudential policies and imposing rules on intermediaries located in other jurisdictions, cross border financial flows are being curtailed. In reality, however, it is the reverse: by correcting market failures (and doing so on a ’level playing field’ basis across countries) such measures help avoid a situation in which liquidity ring-fences and even - as in Cyprus - formal capital controls might need to be imposed. Indeed, the purpose of macroprudential policymaking is not to discriminate between capital provided by residents and non-residents (which is the essence of capital controls and in violation of the European treaties), but rather to provide the same financial conditions within one jurisdiction. In sum, cross-border coordination is a critical requirement for the success of macroprudential policies under EMU, and for assuring the sustainability of the single financial market.

Fourth, what is the most propitious institutional framework to foster and protect such preemptive policies? Currently there are three partly connected, partly separate policy frameworks at the EU/euro area level that are relevant to the activation of macroprudential measures. All have gaps or weaknesses, and they are not fully coordinated. It is important to review where each of these frameworks has needs modifying or complementing, including to explore whether any of them is redundant:

(i) The Macroeconomic Imbalance Procedure

Of all the new measures adopted in the EU and the euro area in light of the crisis, this is the one that comes closest to addressing the underlying policy issues posed by adjustment dynamics in the euro area. It is primarily concerned with private sector imbalances and among international surveillance procedures it is most unusual in seeking to address large and persistent external surpluses as well as deficits. The identification of excessive imbalances following an Alert Mechanism Report based on a simple scoreboard and a subsequent in-depth review leads in theory to the automatic preparation of a detailed and time-bound corrective action plan (CAP) by the concerned member state covering all policies and sector, including the financial sector and thus macro prudential action, considered necessary for the correction of the imbalance. Euro area MS can be fined if the CAP is deemed insufficient or if Commission monitoring reveals non-compliance.

This said, the procedure has drawbacks. By design, the procedure through the score-board is likely to pick up imbalances only when they have already reached a late stage. Also, in practice, despite the identification of excessive imbalances in two country cases (Spain and Slovenia), the Commission failed to trigger the corrective arm, thus possibly undermining the credibility of the procedure. The procedure is ill-designed to make recommendations of cyclical easing measures or pick up the need for structural macroprudential action, and the policy recommendations are mainly focused on structural policies in the real economy. And, finally, the procedure does not
cover well cross-border issues or institutional/euro wide concerns, e.g. the CAP cannot entail measures and recommendations addressed to the ECB, the Commission or any other MS. This is where the macroprudential mandates within the banking union and the ESRB come in.

(ii) The macroprudential mandates within the banking union

The single supervisory mechanism (SSM) adds an institutional feature to the macroprudential policy framework. While macroprudential policy remains primarily the competence of Member States – thereby honouring the fact that national financial cycles may vary between countries – the SSM Regulation also provides the ECB – the supervisor of banking union banks as from November 2014, with certain competences in the field of macroprudential supervision: If deemed necessary, the ECB may – within the scope of the SSM and instead of the national authorities – impose higher capital buffer requirements or "apply other stricter measures" aimed at addressing systemic risks at the level of credit institutions. The ECB mandate is thus asymmetric: they can apply constraints in a boom, but cannot take them off in a slump. The regulation also requires that ECB and NCBS coordinate and they mutually notify each other at least ten days in advance of any decisions regarding the use of macroprudential policies. (The ECB can object to national measures, but cannot block them).

As the different provisions of the CRD IV/CRR legislation come into force, the ECB will, in theory, be able to make use of a large array of supply side measures such as cyclically varying capital ratios, sectoral differentiation in capital weights, systemic risk buffers for O-SIFIS and liquidity measures. What is not clear is whether the ECB has the autonomous power to propose a measure or whether it can only 'add' to a measure, once it has been put in place by the national competent authority. What is also missing at this stage is an EU legal base for demand side measures such as limits on loan to value or debt to income ratios, though of course they exist in some national banking union jurisdictions (e.g. Finland and the Netherlands). In any case, the primary rationale for giving the ECB any of these powers is that a wider euro-area perspective should prevail and that cross-border issues and the need for reciprocity action is duly taken into account. The reciprocity principle is indeed a cornerstone of the Basel III framework for Countercyclical Capital Buffer (CCBs). Their purpose is to protect internationally-active banks from systemic risks arising outside their home country and to avoid incentives for circumvention. For example a CCB decision by the French authority would apply automatically to the French exposures of German banks and, by the same token, French banks’ international exposures will be subject to the CCBs set by the host authorities. The ECB’s central role within the SSM should of course facilitate implementation of the reciprocity principle.

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12 G-SIFIS or Global Systemically Important Financial Institutions are identified by the FSB, while national authorities are competent to identify Other SIFIS.
13 It seems for example that only national authorities can decide on what is an O-SIFI and hence suggest an initial capital surcharge.
14 Does this mean that the ECB can change LTVs on banks operating in the Netherlands?
The second rationale for giving the ECB such powers is to provide an extra layer of protection against a potential “bias towards inaction” or national capture in macroprudential supervision. This is welcome, though competence overlaps also bear the risk of inaction and coordination failure. The evolving nature of banking union will further blur the different institutions' incentives over time and could result in sub-optimal decision making. Finally, the SSM does not deal with EU members outside of the Euro area, despite the Single Market for financial services and close financial interconnections between Ins and Outs. This is where the European Systemic Risk Board (ESRB) comes in, and unlike the case of the SSM some lessons can already be learned from recent experience.

(iii) The European Systemic Risk Board

The ESRB via its non-binding risk warnings and recommendations can play and has played a complementary role vis-a-vis other actors at the EU/euro area level in several respects. First, it covers non-banking union members of the EU and can help with the implementation of the reciprocity principle for the CCB across the EU. Thus the ESRB may provide guidance on principles to guide EU authorities when exercising their judgment as to the appropriate CCB rate, as well as on variables that indicate the build-up of system-wide risk and on variables that indicate that the buffer should be reduced or fully released.

Second, it has in principle a mandate that covers non-banks as well as banks (one of its five recommendations since inception covered money market funds). However, more broadly it is not easy to see how restraint can be exercised over flows based on securities markets or other non-bank channels, but the scope for arbitrage means that some exploration of this may need to be explored in the future. One further degree of freedom is that the ESRB could in principle criticize aspects of the overall policy mix in the euro area that do not break existing rules but are problematic for financial stability. Indeed, the ESRB can issue warnings and recommendations to the Union as a whole, one or more MS, one or more ESAs, one or more national supervisory authorities or the Commission. Given its wider mandate it can also cover more structural macroprudential issues (e.g. and did so by issuing a recommendation on lending in foreign currencies).

The Review of the ESRB is currently ongoing. It may well necessitate a radical overhaul in order to achieve incisive and timely analyses and recommendations. The body's cumbersome consultative decision-making process is indeed a hindrance. This and the fact that the Chair of the ESRB is the President of the ECB may also create conflict of interests (can/does the ESRB have views on mismatched monetary conditions in the Euro area or the UK?), which will only increase with the ECB becoming the micro prudential supervisor. A reform would also benefit from adding the competent national macro prudential authorities (and the ECB) to the list of possible

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addressees. In principle also, there should be some analytical exchange between those responsible for risk analysis at the ESRB/ECB and European Commission staff working on essentially the same issues.

With this background in mind, we will next focus in on the specifics of deploying macroprudential tools and on how successful this has been.
III. The macroprudential tool-kit: evidence on design, benefits and limitations

In this section we will first explore the difference between macroprudential measures that are designed to strengthen structurally the financial system, versus those that are designed to have a time-varying impact. Against that background, the practical issues in implementing such measures are discussed, with a view to assessing how much reliance should be placed on both structural and time-varying measures in a euro area context.

A The macroprudential toolkit

(i) Tools to structurally strengthen the financial sector

Traditional macroprudential tools such as higher capital ratios, exposure limits as well as measures to reduce the interconnectedness of the system and reducing the incidence of too big too fail firms all contribute to a more resilient system better able to withstand and prevent the transmission of adverse shocks.

Mapping Tools to Objectives: Structural Dimension

This said, the drawback of policies to permanently constrain the financial sector is the risk of circumvention and development of structures that are not bound by regulatory control, but that will be more difficult to monitor and control. Examples are the development of the repo market in the US with the introduction of reserve requirement, leasing in Eastern Europe, money market funds or direct cross border borrowing. In addition, it needs to be borne in mind that in some cases, greater structural robustness requires relatively complex changes to the financial market infrastructure that are costly and take time to implement (e.g. the creation of central counterparties for the clearing of derivatives trades). And last, but not least, depending on the nature and degree of financial repression, undermining the intermediation of savings can of course have non-negligible welfare implications which are difficult to assess ex ante.
(ii) Tools to limit the cyclical dimension of macroprudential risk

Typically, three sets of tools take the forefront when it comes to managing the cyclical dimension of risk: countercyclical capital buffers and time-varying provisions, sectoral tools and liquidity tools. All three have joint goals which are to limit the build-up of risk in the upward phase of the cycle, strengthen resilience to shocks at that point and provide stimulus and breathing space in the downward phase. The countercyclical buffer will be available in many countries implementing Basel 3. According to the Basel III framework, the CCB requirement ranges from 0 to 2.5 per cent of risk-weighted assets (RWA). National authorities can implement a buffer requirement above 2.5 per cent if deemed appropriate, but international reciprocity is voluntary above the 2.5 per cent limit. If the countercyclical buffer is increased, this should normally be preannounced by up to 12 months to give banks time to meet the higher capital requirements before they take effect. However, if it can be justified by exceptional circumstances, the pre-announcement period can be shorter than 12 months. Reductions in the buffer rate, on the other hand, would take effect immediately to help reduce the risk of credit supply being constrained.

Sectoral tools such as changes in risk weights, exposure limits for certain types of exposures or changes in lending conditions for certain types of borrowing (e.g. changes in loan to value ratios or debt to income ratios in mortgage lending) can help to take the steam out of certain lending activities. Finally, liquidity tools that reduce reliance on non-core funding (e.g. wholesale or cross border short term funding) can also increase resilience and discourage the development of a domestic credit boom. Basel 3 again imposes measures to reduce funding risks such as the Liquidity Coverage Ratio and the Net Stable Funding Ratio. Levies or reserve requirements linked to the structure of a banks' balance sheet are also a possibility. Finally, thought has also been given to the role of procyclical margin requirements in securities lending.

Mapping Tools to Objectives: Time Dimension

Source: IMF staff.

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16 “Key Aspects of Macroprudential Policy”, IMF, June 2013
17 “Macroprudential Policy Tools and Frameworks”, Progress Report to G20, October 2011
(iii) Operational issues regarding the use of macroprudential tools

a) Data

The availability of a large range of multi-faceted instruments is just a starting point. Actual use requires significant amount of preparatory work. First, there is a need to have a good understanding of the financial stability vulnerabilities. In practice, information on interconnectedness for example such as between financial institutions (including cross border), on OTC derivative market exposures or money market funds are typically unavailable on a timely and frequent basis. Aggregate macro and financial data, such as for example the output gap, are only available with a lag and typically suffer from measurement problems. Also, by nature, systematic manifestations of financial innovation take a while to be captured by data collection exercises, typically well after they have started to pose a potential threat to the system. Second, there is a need to have sufficient amount of granular information to allow for the calibration of macroprudential tools and to monitor their effectiveness. For example in order to gauge the effects of changes in debt to income ratios on mortgage demand, granular household stock and flow and real estate data are necessary. And these again, - if available - suffer from long lags.

b) Calibration

Notably the use of macroprudential tools for cyclical purposes raises questions about appropriate calibration. An understanding of the transmission channels and impact is often difficult, notably in absence of appropriate data, as just mentioned. Behavioural reactions are also tricky to assess when it comes to discretionary changes in policy as opposed to rules based changes. Typically, it is not the measure itself which has a bearing on economic agents but also the degree and type of communication around it. And of course it depends also if in parallel the general policy setting changes, notably monetary and fiscal policy.

c) Rules based vs Discretion based use of macroprudential tools

A rules-based system relates uses of macroprudential tools to particular triggers. For example, the CCB is imposed if the credit to GDP ratio exceeds a certain threshold value. Such rules based system should help reduce uncertainty and anchor expectations. They should also help prevent forbearance. But given the relatively limited experience of many countries, the calibration and behavioural uncertainties, a need to coordinate with other jurisdictions and tensions with micro supervisory objectives in a downturn, in practice an important degree of discretion and judgement is often necessary. Of course this has the potential to undermine the credibility of policymakers, especially if there is a perceived delay in action. A politicisation of macroprudential policy could well ensue.
Evidence of the use of macroprudential tools and effectiveness

The evidence of successful macroprudential action for structural purposes, though it is thin, exists. Hong Kong, e.g., in the early 1990s adopted the 70% loan to value ratio for mortgage loans as its long term regulatory policy goal, and this was set independent of financial or economic cycles. Importantly, the policy’s aim was not to directly manage asset price cycles, but in addition to a direct strengthening of the sector, reducing the risk of cycle amplification through bank credit. The consensus is that this policy has had a major stabilising influence on the banking sector, notably through limiting delinquencies in the face of large property market downturns (of around 30-40%).

The bulk of the current literature, however, has focused on the use and effectiveness of macroprudential policies in the upturn of the cycle. In Eastern Europe, concerned with dampening strong credit and housing booms, fuelled by foreign-exchange denominated or indexed cross-border loans, policy makers responded with tightening loan classification rules and increasing reserve or sectoral capital requirements, notably on Fx or housing loans. Differentiated capital weights have also been popular in some Asian economies (Malaysia, Korea) post the Asian crisis, or in Australia (increasing capital ratios for non-standard mortgages).

Studies found some impact in reducing credit growth, asset price inflation and leverage in the private sector. But the policy message has also been that supply side measures can quickly lose effectiveness when banks hold capital well above the regulatory minimum. They may also be relatively easily circumvented through recourse to non-banks, foreign banks and their branches (like in Bulgaria and Serbia), and off-balance-sheet activities, which are located outside of the regulatory perimeter.

Instead of (or in addition to) supply-based measures, a range of Asian (Korea, Hong Kong, Singapore) and Latin American economies have focused on the demand side of credit, namely through varying caps on loan to value or debt to income ratios applied to borrowers. Many advanced economies, too, have introduced them since the crisis (Netherlands, Finland, Canada, NZ). In some cases these measures were targeted at particular segments of the market (e.g. in Korea, on speculative regions). Sectoral demand side measures, in contrast to supply side measures, though politically more difficult, have the advantage of offering greater protection from circumvention. The evidence on their effectiveness, though perhaps more positive, also remains mixed. While cross-country work suggests that these policies were successful in limiting credit growth and house price appreciation, country-specific episode studies are more critical.

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18 "Loan-to-value-ratio as a macroprudential tool - Hong Kong SAR's experience and cross-country evidence", HKMA, BIS Papers 57
Korea and Hong Kong, for example, caps on loan to value ratios were found to positively impact real estate prices and transactions, but had little bearing on mortgage origination. Here too, policies often had to be adjusted to counter circumventions (e.g. Korea expanded the regulatory perimeter of LTV to include non-bank financial institutions in 2006). And the evidence also suggests that more than a cyclical impact, the measures ensured a higher structural resilience of the system, as borrower delinquencies remained lower.

Finally, when faced with volatile cross-border or short-term debt financed domestic credit booms some countries put limits on banks' liquidity structure, thus pre-empting some of the reforms that are yet to come from the new Basel accord. In the aftermath of the Asian crisis, Korea for example introduced a series of liquidity rules and more recently, in response to the global financial crisis, a levy on banks' non-core FX borrowing with a maturity up to one year. On the more recent measures, the jury is of course still out. Turning to the earlier ones, exclusion of foreign bank branches from the FX liquidity regulation turned out to be a problem during the 2009 financial crisis. But also, for domestic banks, it is important to note that even though banks' FX liquidity ratio was well above the guideline the measure was unable to prevent liquidity shortages.

In contrast to measures taken in cyclical upswings, the literature and evidence on the effects of macroprudential easing measures is sparse. In the wake of the Asian crisis, Hong Kong increased loan-to-value ratios, abandoning the 60% ratio for luxury properties in 2001 and putting in place a mortgage insurance plan designed to raise the accessibility of housing to households with down payment constraints. Australia adjusted its supervision and regulation of banks in light of changing conditions in the housing sector, but overall the measures were relatively mild in nature. More importantly, the relaxation of credit controls, reserve requirements and capital requirements in the 1980s in the US in response to the slumps was both a cyclical and a structural macroprudential relaxation. This stood partly behind the boom of the 1990s, but also weakened the resilience of the financial sector once the boom burst in 2008.

Finally, while there is evidence in favour of successful use of macroprudential policies, notably to build up resilience, empirical tests have never attempted to directly link macroprudential policies to financial stability. This is problematic given that macroprudential authorities do not have as a mandate to manage credit flows but rather to secure financial stability. Indeed, rather than a focus on specific credit aggregates, asset prices or individual policies, it is a holistic policy approach towards 'macroprudence' that we are calling for. This is the subject of the next section.

26 Ibid
27 Ibid
IV. Towards a policy approach of 'macroprudence'

This discussion of macroprudential measures in the context of EMU has highlighted a basic tension or concern that needs to be acknowledged in the period ahead. The euro area context is one in which, potentially, macroprudential measures appear particularly valuable – including because of the absence of national monetary policies in member countries: however, experience with such measures in other countries and regions does not give a rock-solid sense of assurance that such measures will have a very strong effect, perhaps especially in a time-varying context. In light of this it is important to consider the broader support for financial stability provided by the goal and orientation of policy frameworks, and the way incentives in the system work to contain excessive risk-taking. It is this stability-oriented policy environment that we term ‘macroprudence’.

An interesting starting point in considering what this may mean in practice is to consider cases where success has been achieved in the recent past. It is striking that, during the 2008-9 global crisis, a number of advanced economies escaped severe financial stress – and they did so without significant recourse to macroprudential measures of the kind discussed in this paper. Prominent examples include Australia, Canada, Poland, Sweden, and Turkey. These cases had a number of features in common. They had relatively sound fiscal policy settings. They had independent monetary policies, which were directed centrally toward containing inflation and inflationary expectations. And they had robust approaches to pursuing microprudential supervision. What is the more general lesson of such cases? Discussions with policy-makers, market participants and academics suggest that these countries' resolve in pursuing risk-averse financial policies in part reflected institutional 'learning' from experience with their own domestic financial crises in recent decades. The costs of resolving these earlier crises may have strengthened the political-economic arguments for conservative financial policies. Risk-averse fiscal, monetary and microprudential policies interacted so strongly that financial stability could be maintained, even without the extra instrument that macroprudential policies represent. Colloquially, one could say that the political and economic system in these countries had been 'innoculated', at least for a period, against excessive risk-taking and against official complacency towards destabilising financial trends. This process of inoculation is not an experience that one could wish to see repeated as a matter of course, but there are lessons to draw from it.

In light of these cases, it is worth considering whether (for any given set of regulatory ratios and definitions) incentives affecting the financial sector can be changed to embed risk-aversion more deeply and permanently.

A Embedding macroprudence as a culture of risk-aversion

The experience in countries that avoided a crisis provokes the question whether it is possible to embed a deeper political-economic commitment to risk-averse financial policies, broadly defined. It is not clear that these cases can themselves be seen as example of permanently breaking a cycle in which the political-economy of financial stability seems to undergo cycles. Troublingly, since
2008, and despite persistent above target inflation, Turkey has reverted to much more risky macrofinancial strategy instead of tightening monetary policy; Canada is experiencing a major housing boom; while Denmark (which alone escaped the Nordic banking crisis unscathed) has had a serious episode of financial stress. Can, or how can, the incentives facing public and private sector actors be shifted in a permanent manner?

For the culture of risk-taking, and specifically for practices in microprudential supervision and corporate governance, shifts in risk culture do not occur randomly in political-economic isolation. They reflect at least three sets of institutional influences: the influence of global risk premia; the incentives arising from structural banking measures and bank resolution regimes; and the incentives facing supervisors.

A first issue concerns global trends in liquidity and risk premia - and underlying these, the international pattern of saving and investment balances. Recent research by Helene Rey of LBS highlights the global influence on risk premia of monetary conditions in the United States, which may contribute to global cycles in credit and risk appetite. One should probably take one step farther, and ask to what extent global savings-investment imbalances and wage-price developments created a real economy setting that led to a nexus of easy money, low inflation, dissaving, and a strong expansion of the non-traded good sector (including real estate investment). Persistently easy monetary conditions in the United States did not arise in a vacuum.

The bottom line for policy in other countries, at all events, is the need to acknowledge limits on the degree of autonomy that an independent monetary policy can assure, at least when it comes to risk premia and credit developments. Again, harking back to the earlier discussion of instrument assignments, this argues that there may be a missing instrument in the form of macroprudential policies.

A second issue relating to the economic culture of risk-taking concerns the incentives set by resolution regimes and reforms to banking structures. It seems reasonable to think that the shift currently underway to shift the burden of losses towards the private sector should affect attitudes to risk - and should directly serve to contain financial risk. Structural reforms like the Volcker rule, the Vickers report or the Barnier/Liikanen proposal may also reduce complexity in banking groups thereby facilitating the accurate pricing of risk, though concerns about the across-board-nature and hence arbitrariness typically would favour a more case-by-case approach through resolvability assessments and individual supervisory action. More broadly, thanks to the strengthening of supervisory powers, there will be the possibility to force banks to shed assets or simplify business structures if there are concerns with too-big or too-interconnected-to-fail.

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A third and related issue concerns the incentives supervisors face. It is not enough to have all the powers (and indeed effective resolution regimes should give supervisors the confidence to lower capital surcharges in a downturn as intended), supervisory bodies need to operate in a risk-averse culture and need to be proactive if not 'aggressive'. The details of supervisory mandates matter here. It is no surprise that some supervisory bodies that also had financial sector development mandates (e.g. for the FSA 'the desirability of maintaining the competitive position of the United Kingdom' and 'the desirability of facilitating innovation') had difficulty with meeting their financial stability mandate, as the industry was growing, creating employment and expanding market shares. But risk cultures go beyond mandates: supervisors need the implicit backing by the government and parliament for such a risk-averse approach (APRA considers this as one of the key elements behind successful supervision). They also need experienced, well-rounded and independent supervisory staff, familiar with previous boom-bust episodes and willing and able to ask the difficult questions.

**B  Relevance to EMU**

Finally, there is a question how these considerations are relevant to the specific challenge of safeguarding financial stability under EMU. In general, they seem to reinforce the view that the use of macro prudential policies under certain conditions is indeed warranted. This appears to be true at the level of the monetary union in its entirety, but it is particularly relevant at the level of individual member countries and in the presence of country specific credit and housing booms. In addition, most member states have relatively rigid economic structures with poor adjustment capacity. And even in the case of more flexible economies such as Ireland, the argument can be made given weaknesses in insolvency frameworks and the slow adjustment capacity of housing markets.

The country-specific cycles experienced in the run-up to the euro area crisis are an intrinsic feature of life in a monetary union (or at least, one that falls short of being an optimal currency area). Currently, for example, Germany may be entering such a country-specific cycle. It seems plausible that euro area policy interest rates may remain low in real terms relative to cyclical trends in Germany over the years immediately ahead. In this setting, German inflation is and will likely be above the euro-area average.

Given Germany’s current account surplus, some loss of price competitiveness over the medium-term may be seen as an equilibrium phenomenon, and should not be resisted. Of more policy

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29 Jacek Osinski, Katherine Seal and Lex Hoogduin "Macroprudential and Microprudential Policies: Towards Cohabitation", IMF Staff Discussion Note, June 2013
30 Overconfidence in a regulatory tool risks under-reliance upon supervision, and good supervision is the best countercyclical tool available to us’, Charles Littrell, "Macroprudence versus Macro-Prudential Supervision", APRA, March 2013
31 Ibid “It turns out that Treasury is the critical agency to ensure that successive generations of ministers understand that responsibility for the prudential regulator carries with it an inevitable level of complaint”
concern, by contrast, would be any tendency towards a credit-driven real estate boom that posed prudential risks - whether triggered mainly by German lenders or by cross-border capital flows.

There are some signs already that property prices in Germany are experiencing a strong and continuing rise. Real estate prices in urban areas are considered to be overvalued to the tune of 10-20 percent. But while lending standards in cities are considered somewhat easier, overall surveys tend more towards a tightening of standards, while growth of new mortgages remains moderate at just over 2 percent year on year. But the constellation of low real interest rates, a cyclical position more robust than the euro area average, and rising property prices suggests that attention should be given to readying macroprudential tools to forestall or contain future financial stability risks.

Given the size and openness of the German economy, and the country’s high creditworthiness, the likelihood is that any credit-fuelled real estate boom would suck in capital from other euro area members - and over time from international markets more generally. This may be an interesting test case for the principle of reciprocity, including for the ECB's fulfilment of its macroprudential responsibilities. Would CCBs alone be adequate to counter such financial trends, or could such a case suggest a widening of the scope for reciprocity to such areas as loan-to-value ratios? One needs to note here that, on top of the absence at EU level, there is currently no legal basis for such a measure in Germany. The experience reviewed in this paper suggests however not ruling out any such possibility.

In general, care should be taken not to overburden macroprudential policy instruments: cyclical fine-tuning presents many operational difficulties and risks, so a focus on structural resilience of the financial sector and limited leverage may, in practice, be more promising. Also, when financial stability risks are building up across the board and are accompanied by a generalised decline in risk aversion, monetary policy has its role to play. Indeed, the interest rate is the only policy variable that as FRB Governor Stein has argued ‘gets in all of the cracks’, the same market interest rate affecting all sorts of different financial transactions and actors. No degree of macroprudential policy making is able to achieve this. As the property cycle in Europe’s largest economy goes on, pressure to tighten monetary policy can only grow.

Turning to the institutional set up in the euro area, in the context of the banking union, the responsibility for macroprudential action and surveillance is shared across a number of institutions. This should reduce the "bias towards inaction" and the ECB acting as a competent supervisor across jurisdiction should facilitate coordination and help prevent circumventions. However, the ECB does not seem to have a mandate neither for unilaterally imposing constraints nor for imposing demand side measures. It can also not ‘take off’ measures in a slump, potentially a major stumbling block for achieving regulatory coherence across the banking union. Moreover, in the early years of the SRM when the potential burden of a bank rescue continues to be mostly national, the ECB may have little

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33 2013 Financial Stability Review, Deutsche Bundesbank.
incentive to invoke macroprudential powers. In this context, there is room for the ESRB to come fully into play, sever some of its ties with the ECB and become an authoritative entity. At the same time, the Commission could step up its use of the macroeconomic imbalances procedure to recommend macroprudential actions to national central banks.

But as argued before, macroprudence goes beyond the macroprudential toolkit. All policies - structural and cyclical- need to be geared towards avoiding a mispricing of risk and excessive leverage. In practice, in the Euro area, as discussed, a heavy burden falls on fiscal policies. As regards supervision, it will be in the hands of the ECB to establish a culture of 'critical prudence' and intrusive supervision amongst its supervisory staff. Of course, having a clear supervisory objective and the full backing of a 'European finance ministry' behind such culture would help in this endeavor, and it will be interesting to see if this can be achieved in its absence. What about the incentive effects of the SRM? While the absence of full risk mutualisation is detrimental to the ECB supervisors pulling the trigger, paradoxically, it may make the bail-in provisions of the new bank resolution regimes more credible and hence discourage excessive risk taking in financial markets. How in net terms this will affect the stability of the financial system remains to be seen.

Once the banking union reaches the steady state, some more fundamental questions may come to the fore: first, does country specific macroprudential action remain a relevant concept and related to this, should the ECB worry about large or heavily interconnected banking sectors at national level or only once they reach critical size at European level? Second, is there a residual role for national central banks or should all macroprudential powers be concentrated within the ECB to ensure a full alignment of responsibilities and liabilities? Finally, all these considerations have relevance for prospective euro area MS. Outside of the Euro area, countries made use of monetary policy tools (reserve requirements) and imposed measures restricting capital inflows as they saw fit. The gist of this paper is that life inside the Euro area could well be more complicated.
V. Conclusion

Macropurposual instruments and approaches captured the attention of policy-makers in the major economies in the wake of the global crisis. But the previous decade had already seen emerging market and some smaller advanced economies experimenting with such policies. Indeed there are examples of using such tools - under other broad headings and labels - that stretch back to the 1970s and beyond. Thus considerable experience can be drawn on in assessing the future role and effectiveness of these policies.

In this paper we discussed the potential role of macroprudential policies in the euro area, first considering the scope and need for such approaches in this specific economic context, and then exploring - in light of past experience - how high should be one expectation that they can play an effective role in this setting.

It seems that a policy 'gap' can be identified in most economies, which macroprudential policies could valuably fill. In individual euro area economies, the case is particularly strong because one other instrument - a national monetary policy - is absent. This argues for exploring actively how macroprudential policies in the euro area can not only strengthen the resilience of the financial system (a structural approach) but also how they can help address macrofinancial swings in the economy, particularly at times when euro area policy interest rates are mismatched with the national cyclical position (a time-varying approach). These considerations underscore the potential scope and value of macroprudential policies in the euro area.

This said, a reading of past experience in the two dimensions discussed above - structural and time-varying - suggests some degree of caution about what impact can be anticipated. Broadly, there is more to support the case for structural than for cyclical effectiveness, although both have been documented. In the euro area, a particular challenge is the very high scope for cross-border leakages and the gradual, but substantive regime shift that represents the banking union; if the ECB as a supervisor can address leakage (through enforcing 'reciprocity') and overcome 'the bias towards inaction' then the outlook could be more promising. And if the ECB's approach can be meshed effectively with that of the ESRB - and the functioning of the Macroeconomic Imbalance Procedure - then the institutional framework in the euro area would be very comprehensive compared with most cases from past experience.

The paper closed by placing 'macroprudential measures' in a broader policy context, which is termed 'macroprudence'. As evidenced by the experience of some countries that avoided financial crises without macroprudential measures, a very great deal can be achieved through the pursuit of cautious macroeconomic policies and through incentives for markets and for their guardians that deeply embed appropriate risk aversion. Taking action to improve such incentives is a crucial complement to the introduction of new prudential techniques. Indeed, without this element, enhanced technical approaches cannot be expected to deliver, and financial stability will remain in jeopardy.
About PEFM

The Political Economy of Financial Markets programme (PEFM) aims to shed light on the way in which institutions, including macroeconomic policy frameworks, interact with financial markets. In the wake of the global and euro area crises, it seeks to promote a better understanding of financial markets and to contribute to improved policy formulation in the future.

Its main activities are to carry out research, hold seminars, and publish findings in outlets that range from academic articles and books to policy briefings and op-ed pieces in the international press. Three initial research groups were set up at the outset, bringing together academics, officials and market participants:

- The first research topic is Financial Integration in Europe – why this has not lived up to expectations, and the implications for banking and fiscal union.
- The second research topic is Regulatory Capture. This explores how relations between the financial sector and regulators interacted with political and ideological influences in the ‘regulatory space’, during the run-up to the crisis.
- The third research topic is Macroeconomic Policies and Financial Stability – asking how monetary and fiscal policy regimes can respond to instability in the private sector, without jeopardizing policy transparency.
- Several future research priorities have been identified. These include shadow banking, and also the impact of advanced economy financial policies on emerging market countries.

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